



Geographic Information System

**Zonal Statistics & Map Layout
Lab Practice**

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National Taiwan Normal University



Outline

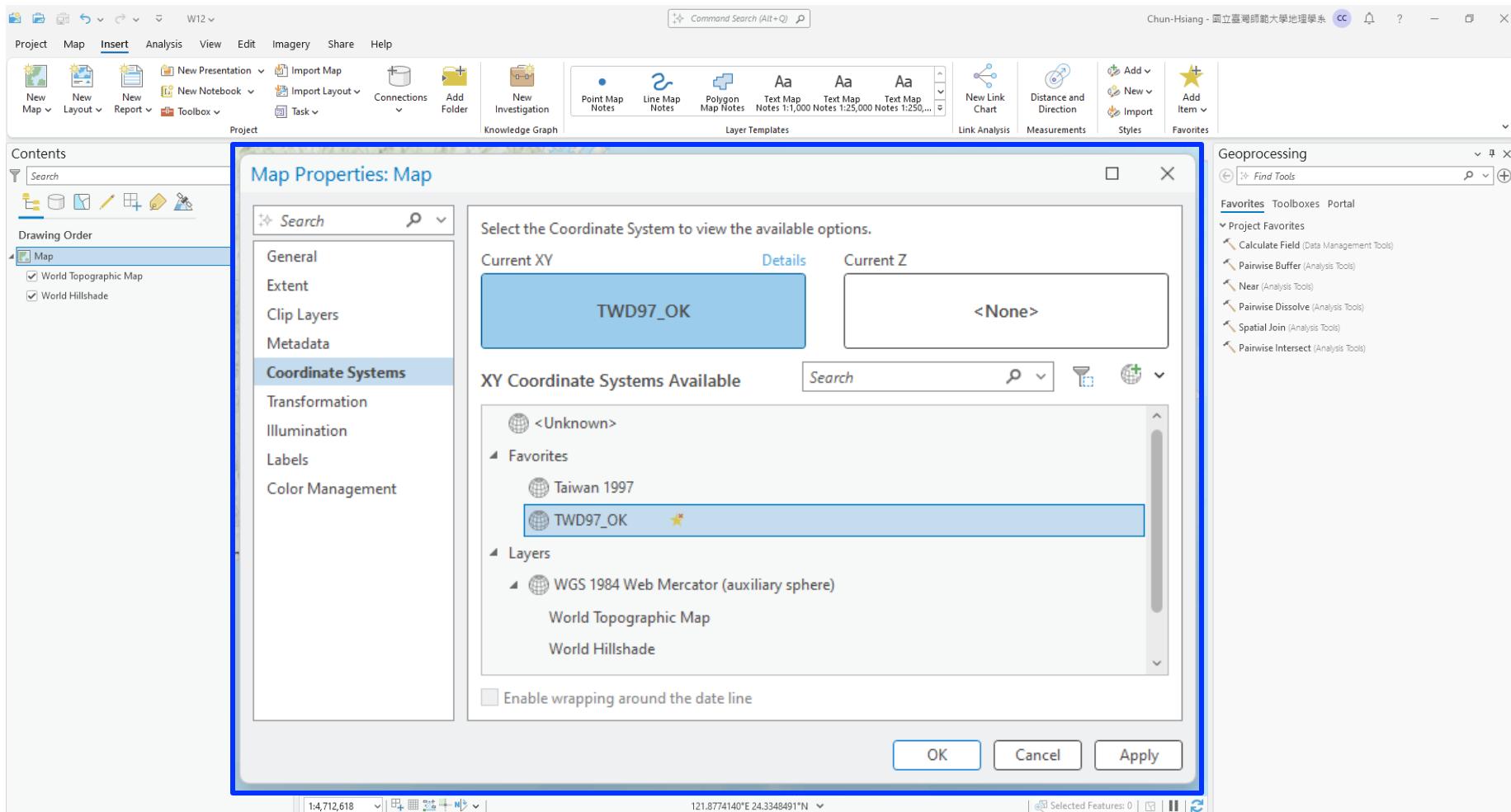
- DEM Data Processing
- Characterize the Geomorphology of Taipei City
- Plot a Map



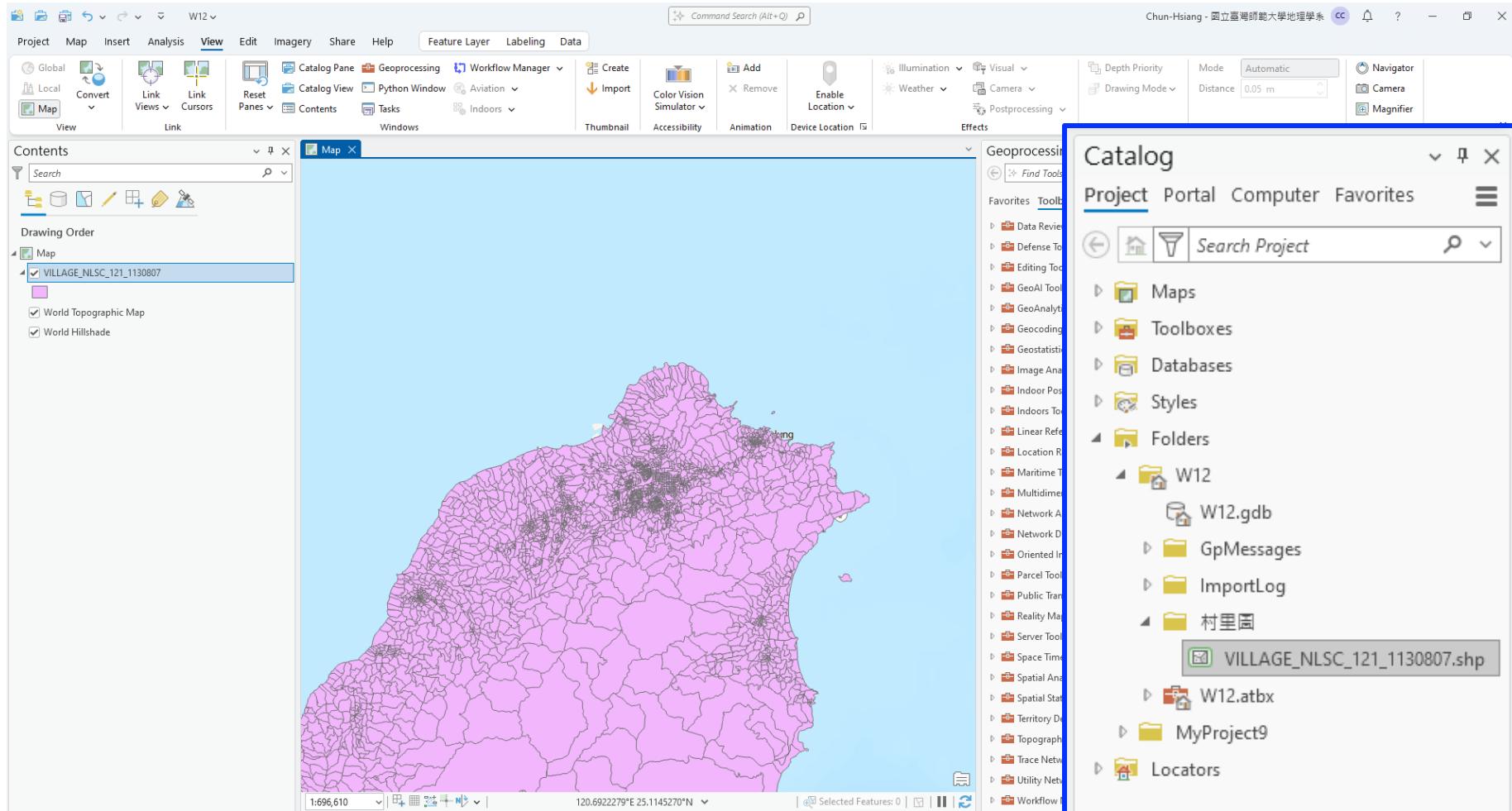
Initial Settings (...)

- 1) Set up the CRS of the map
- 2) Load Taiwan Village Data and Export Taipei Village Data
- 3) Mosaic To New Raster to combine all DEM data
- 4) Clip Raster with Taipei Village Boundary
- 5) Compute Contour
- 6) Compute Hillshade
- 7) Compute Slope
- 8) Feature To Point for Taipei Village Data
- 9) Compute Viewshed
- 10) Create Chart
- 11) Map Layout

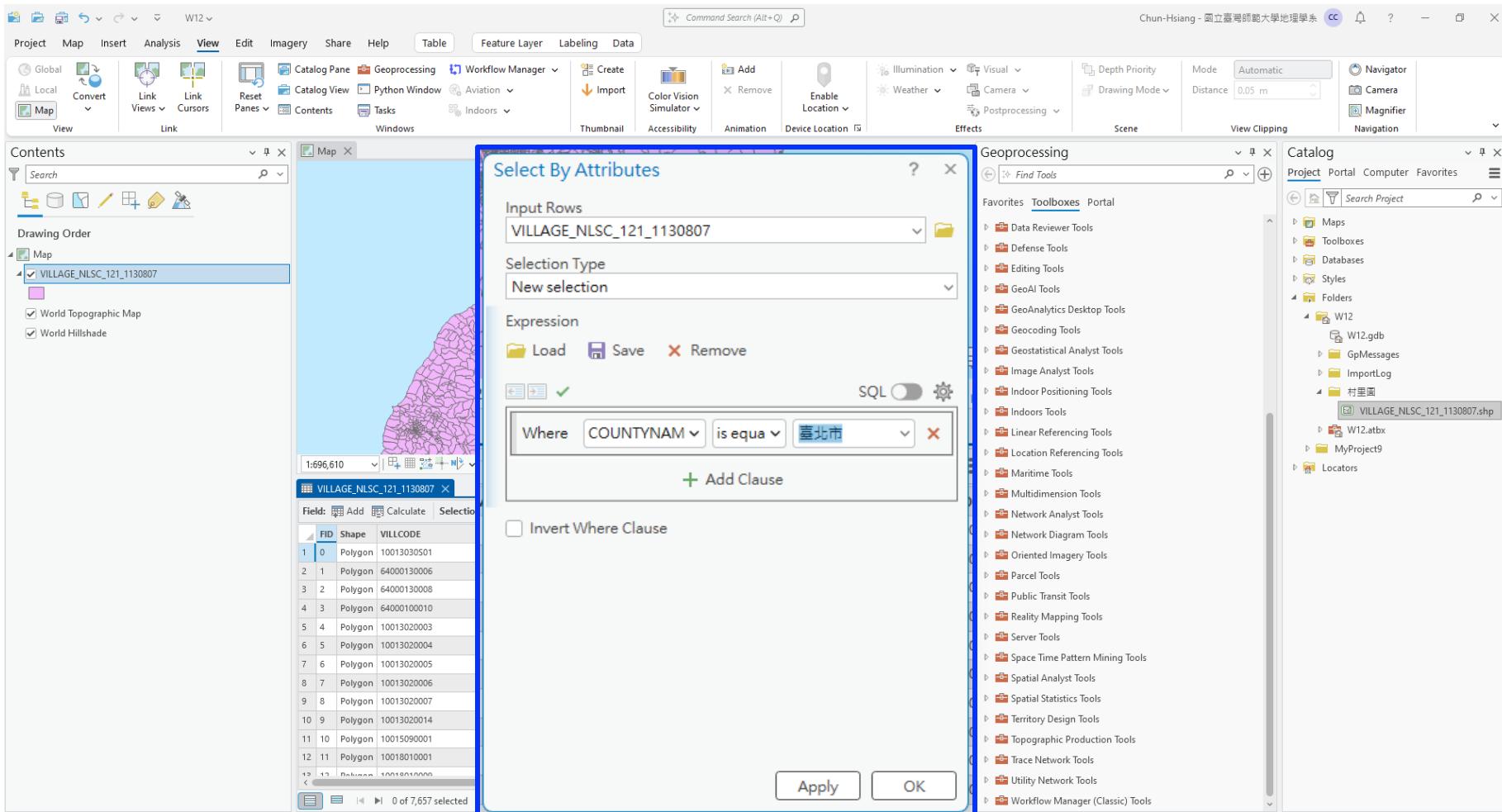
Map Settings



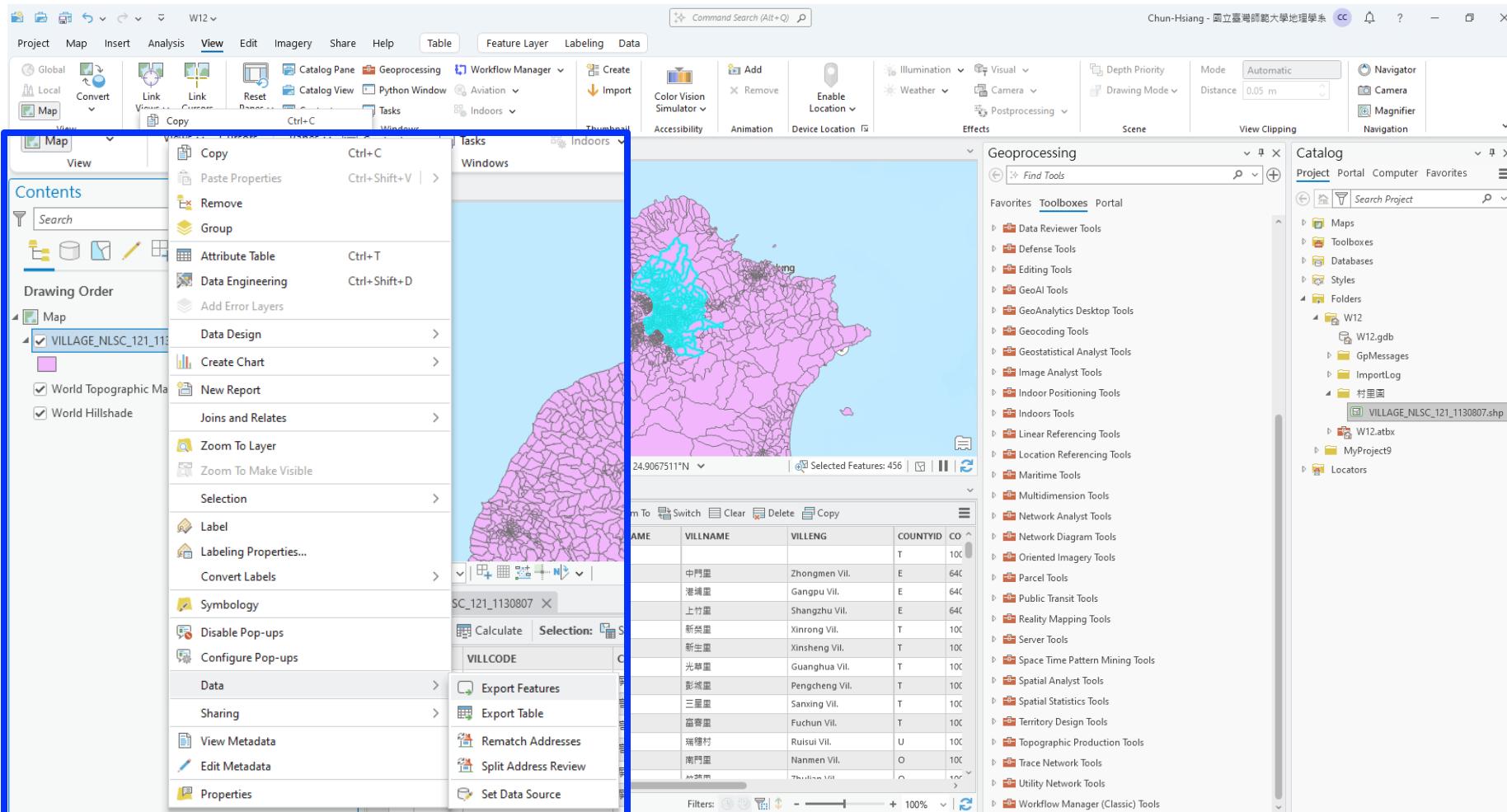
Import Taipei Village Data



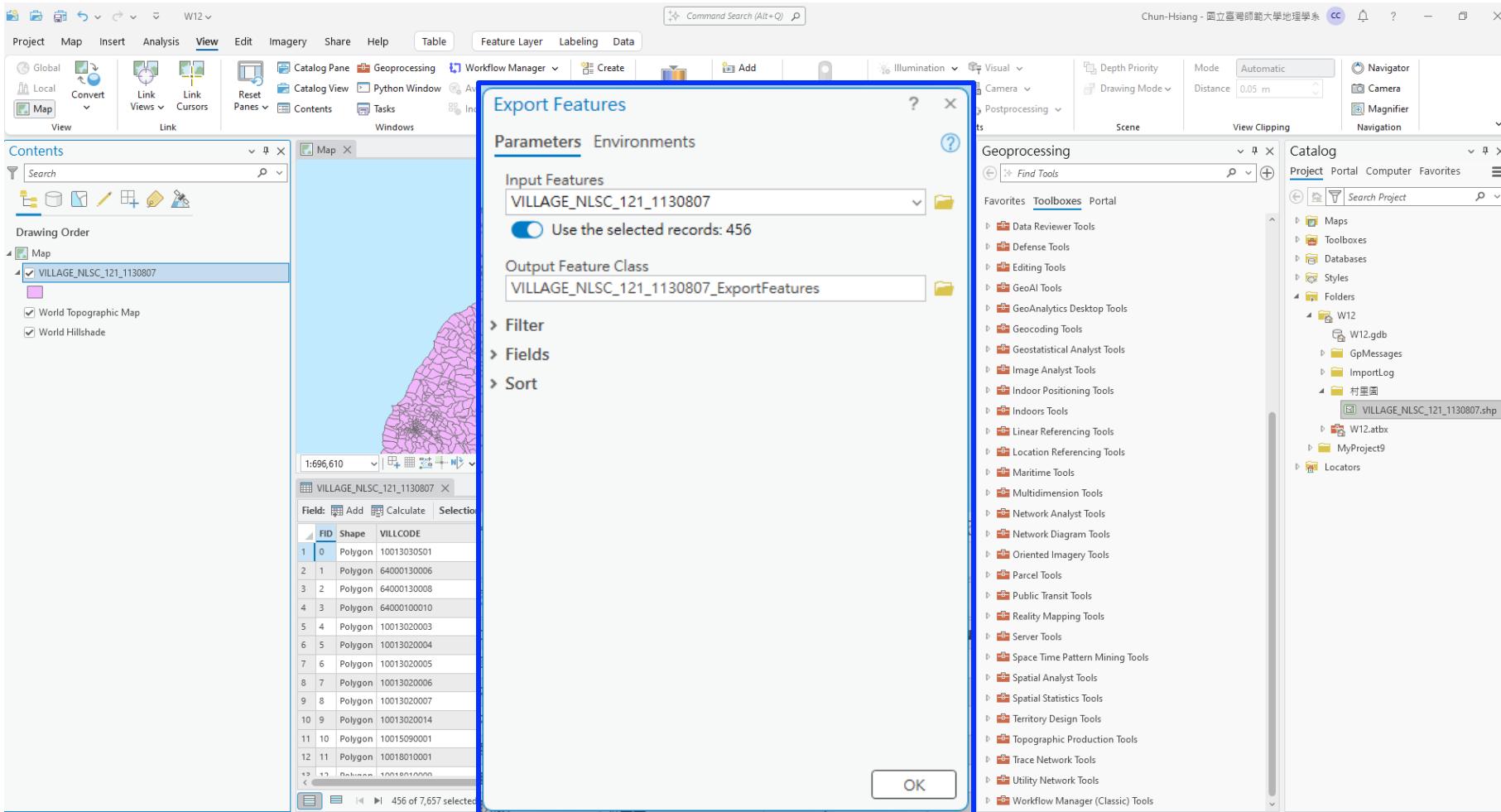
Select By Attribute :: Taipei



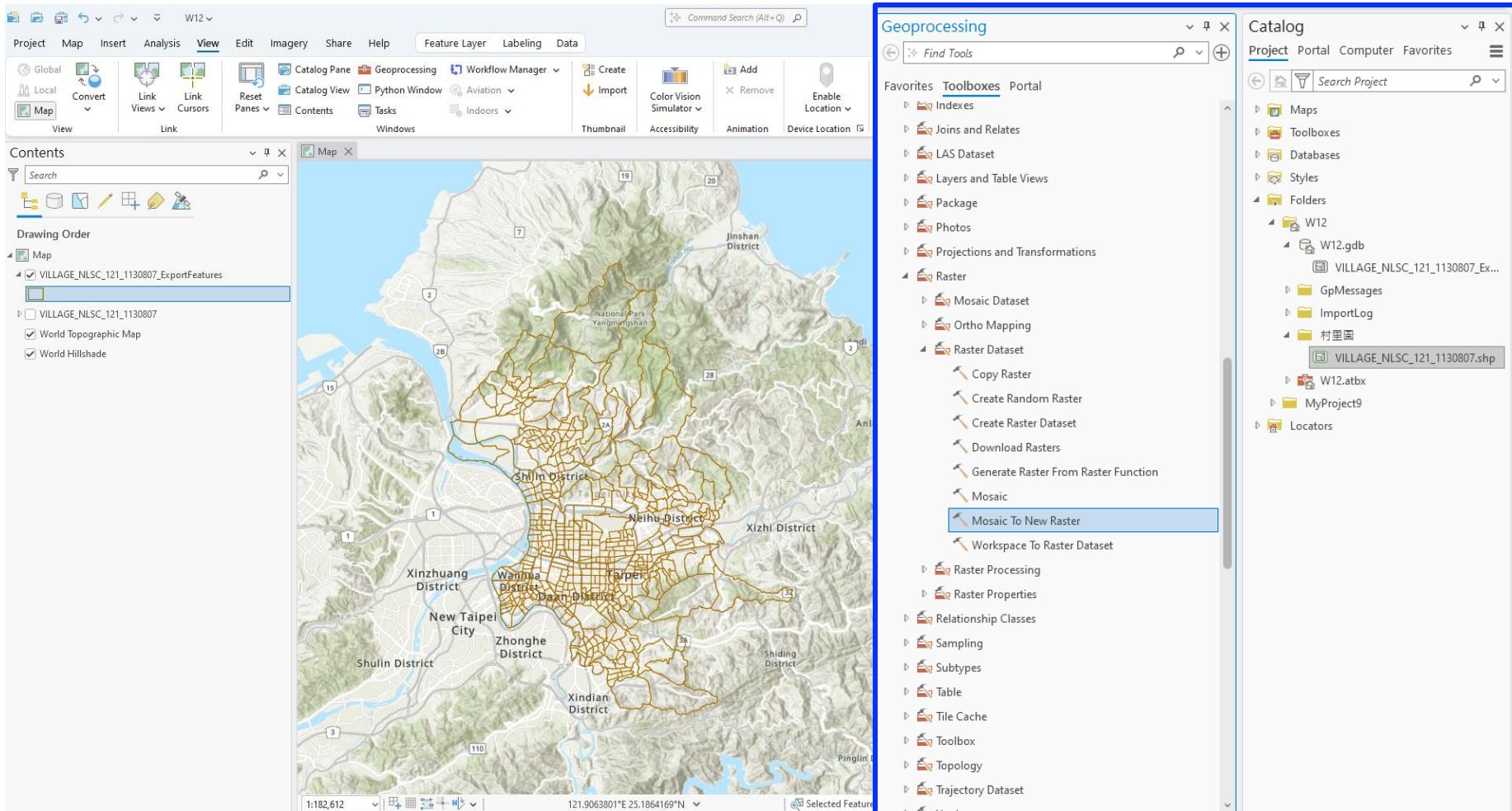
Export Features



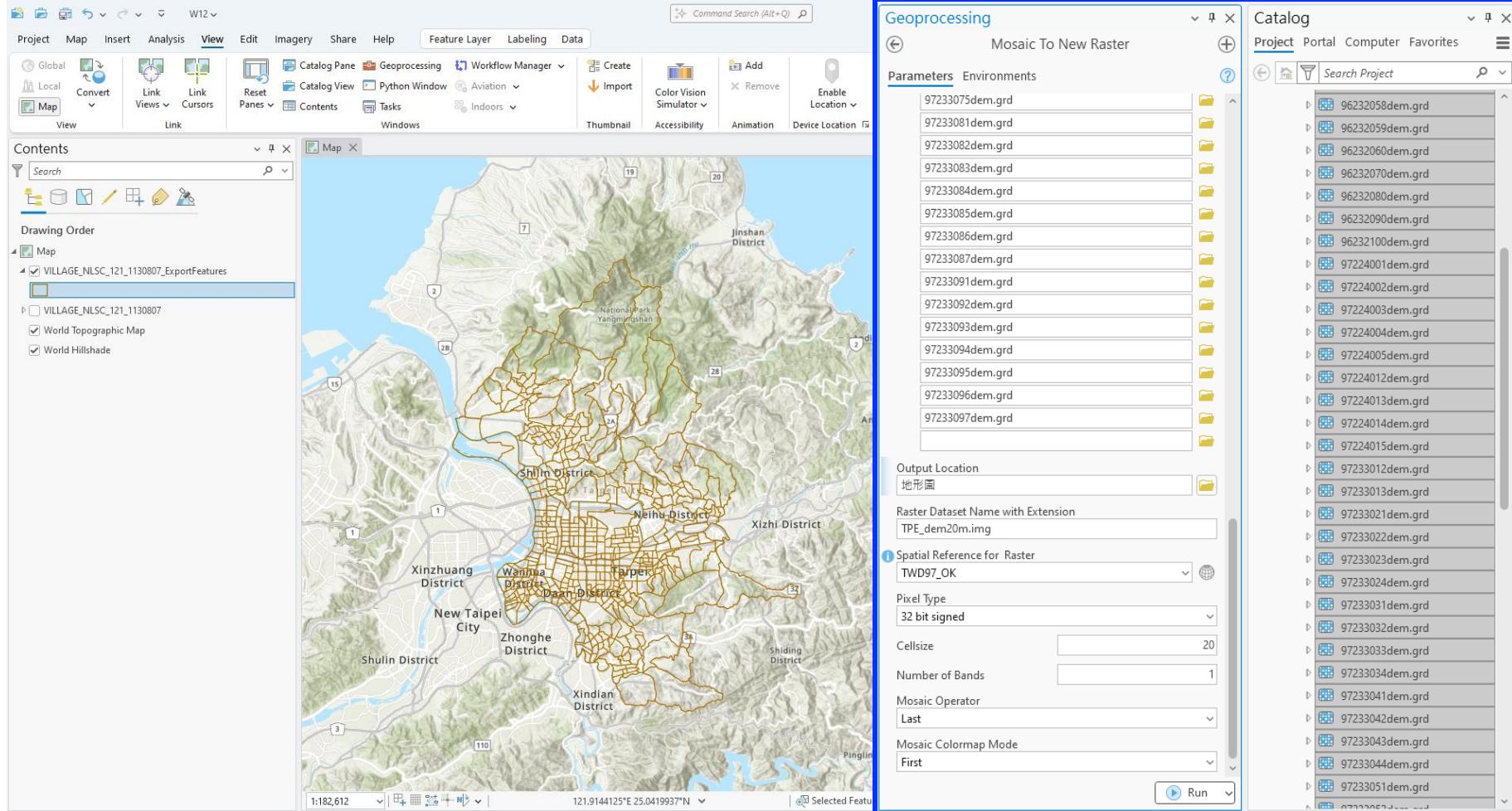
Export Features



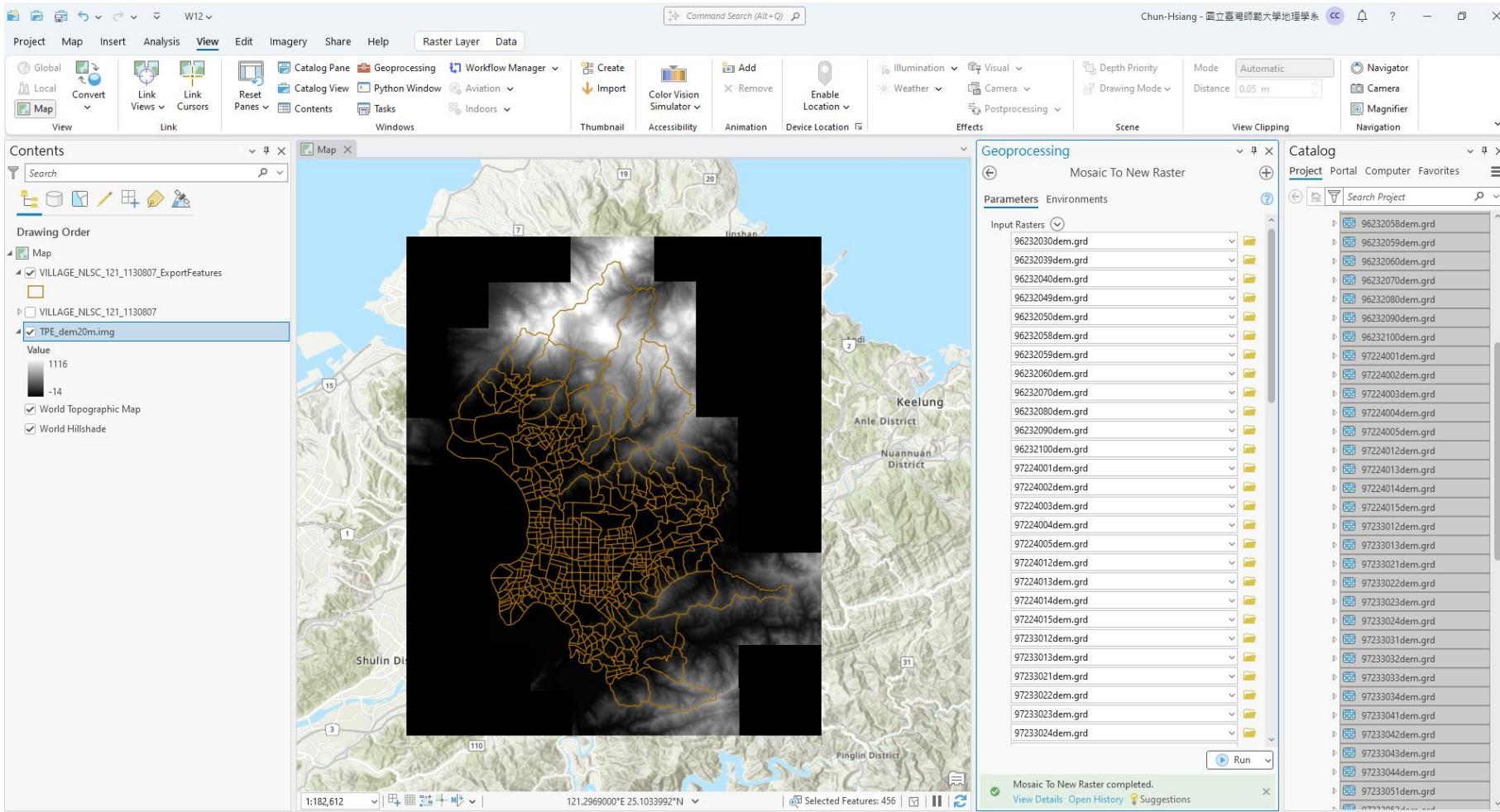
Mosaic To New Raster



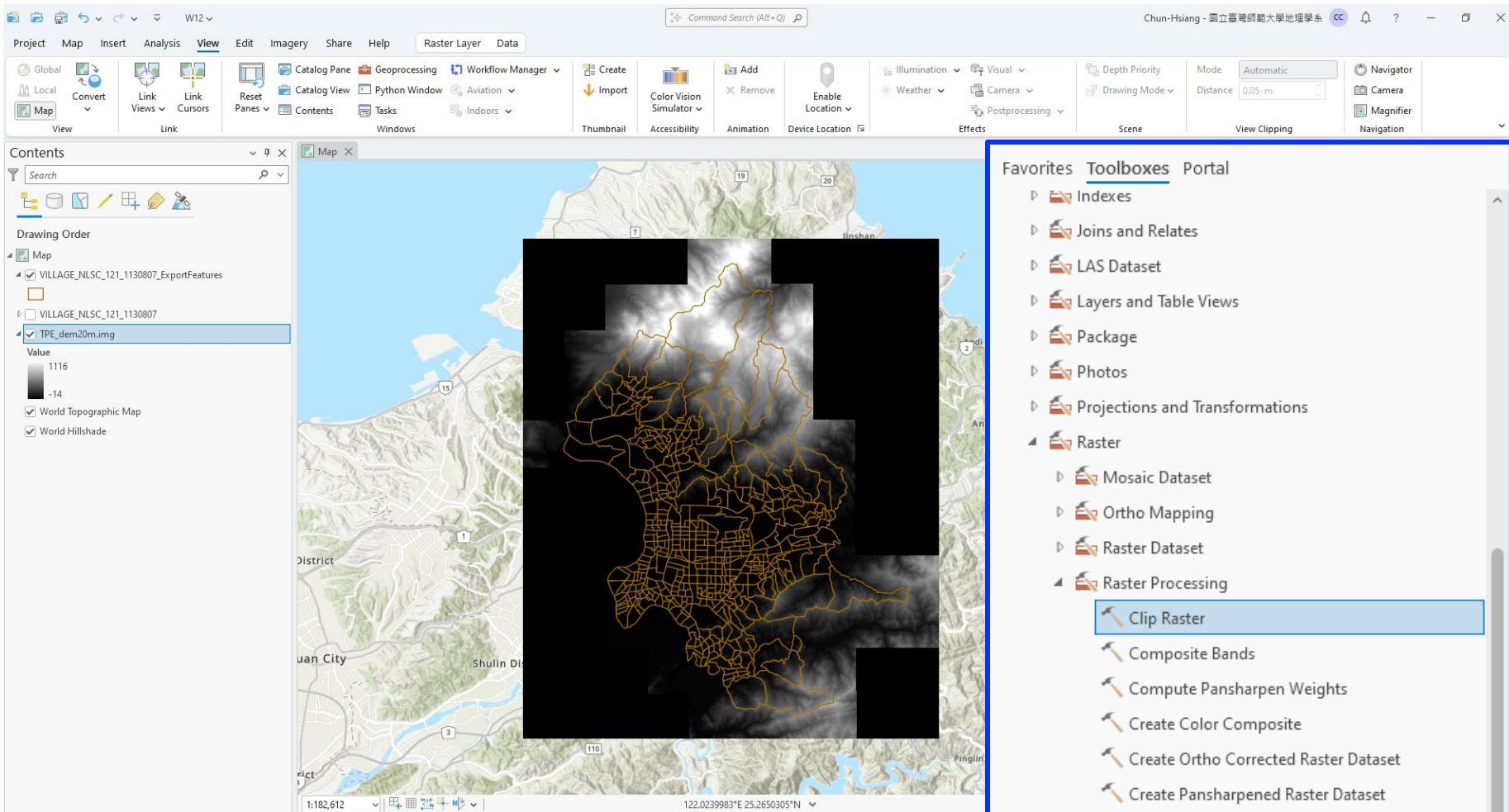
Mosaic To New Raster



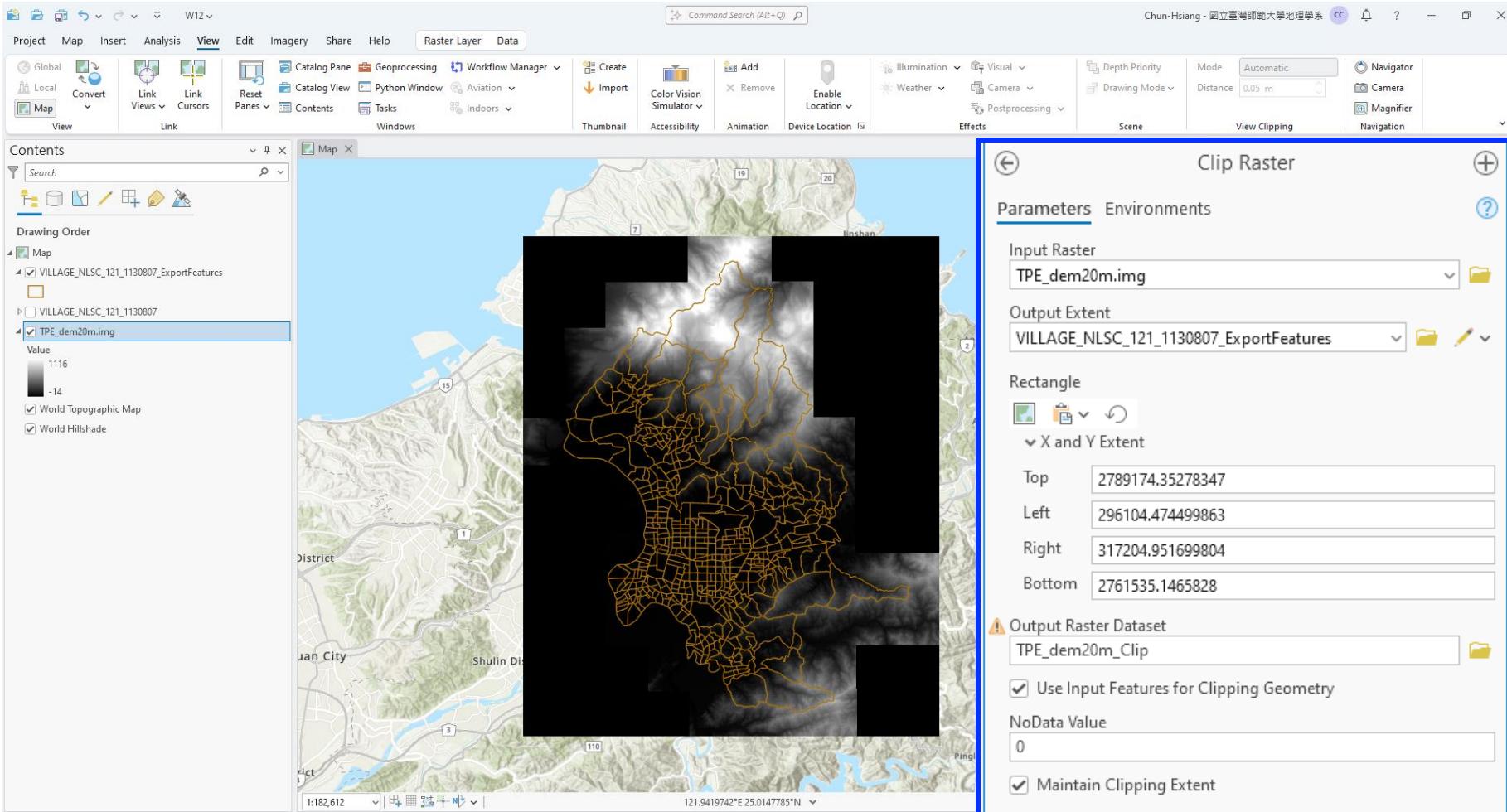
Mosaic To New Raster



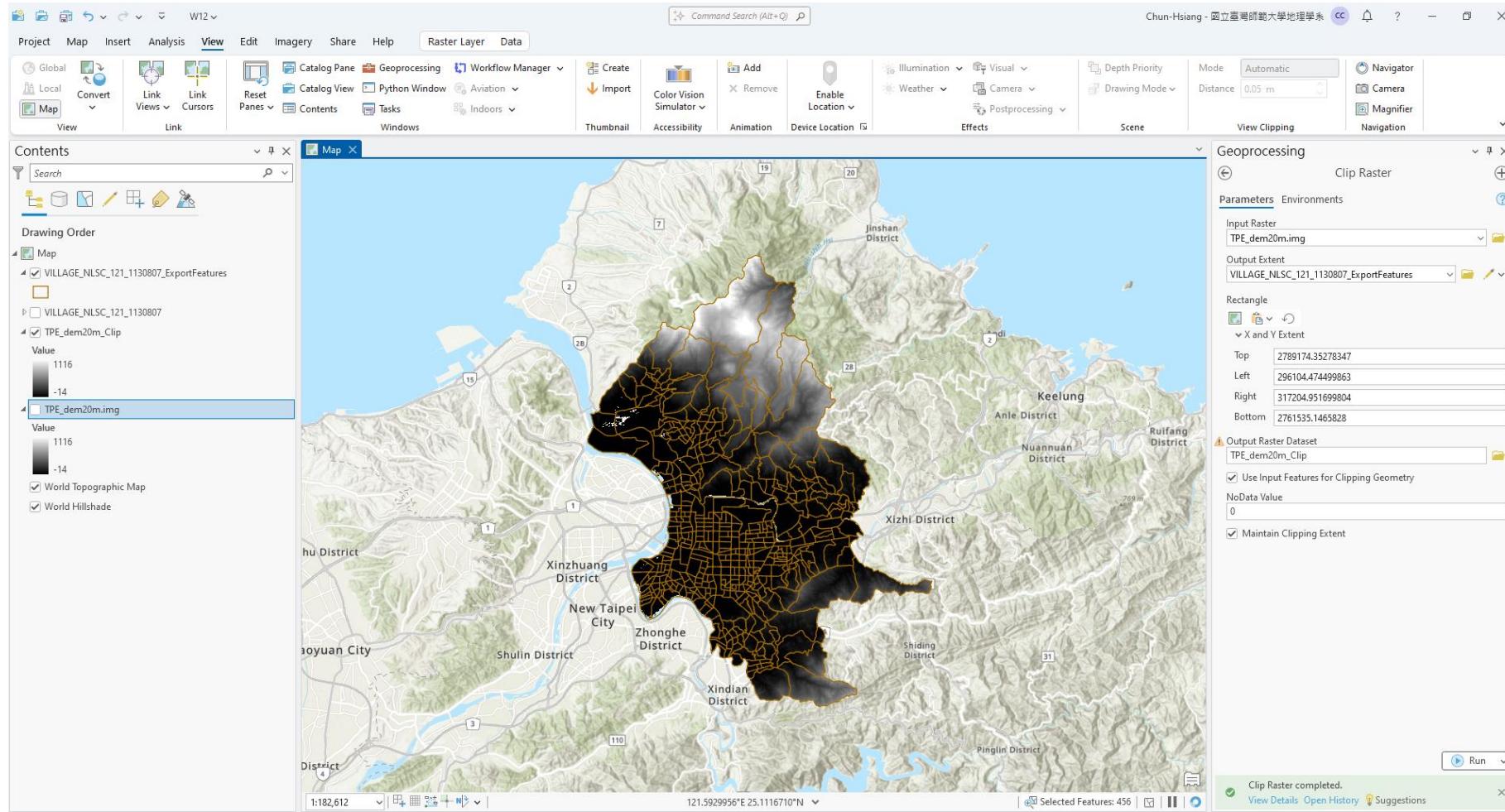
Clip Raster



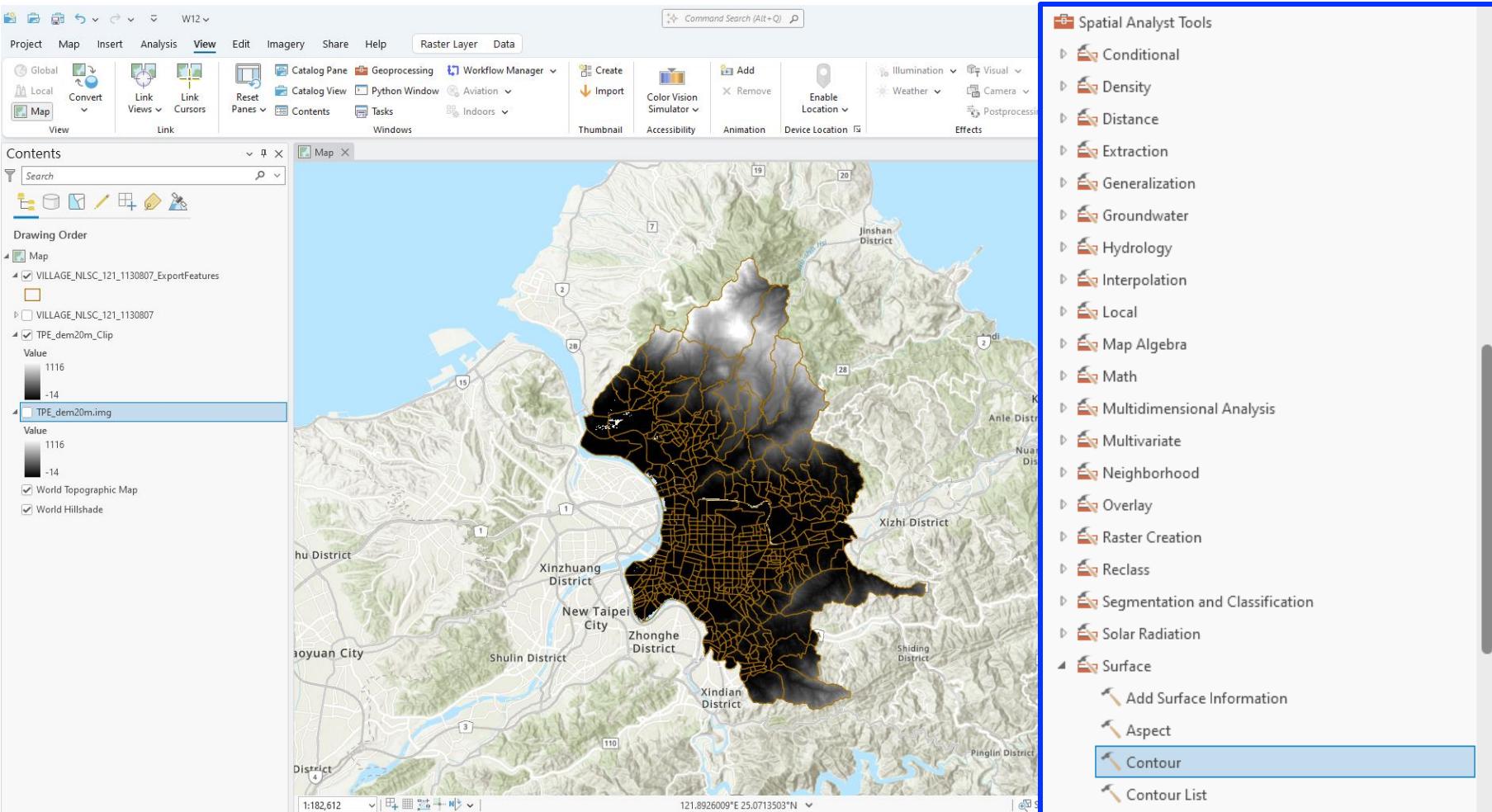
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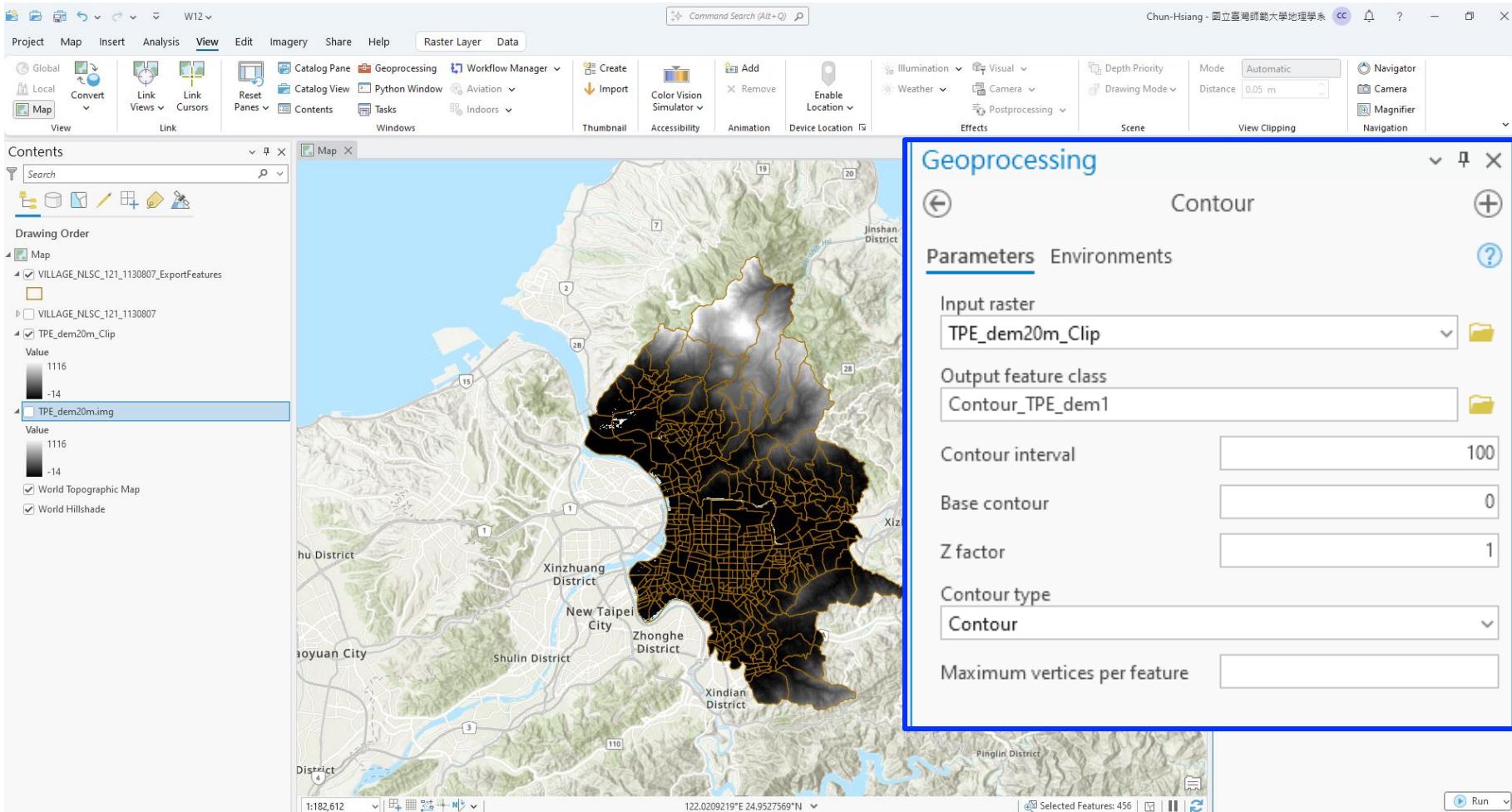
Clip Raster



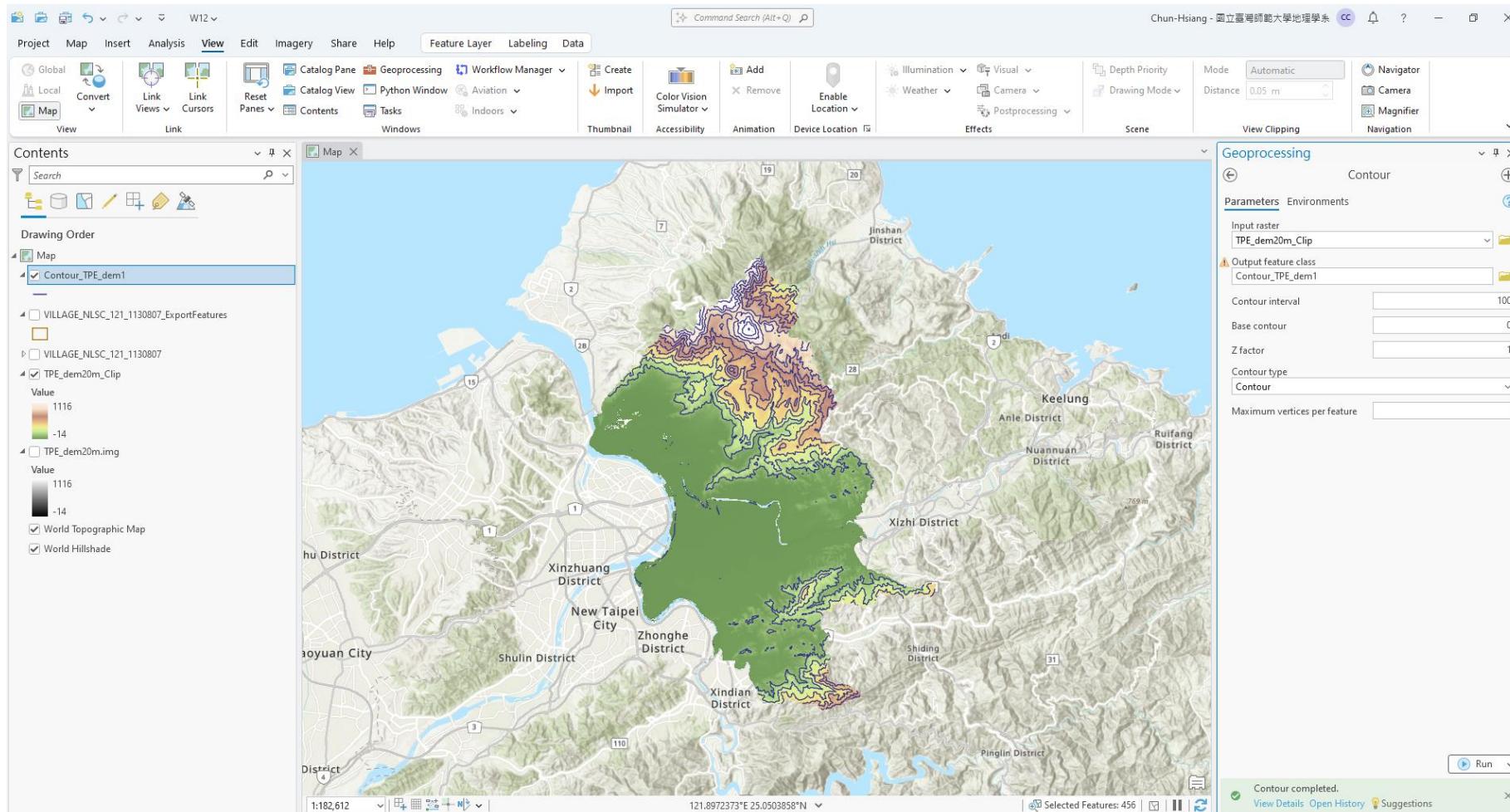
Contour



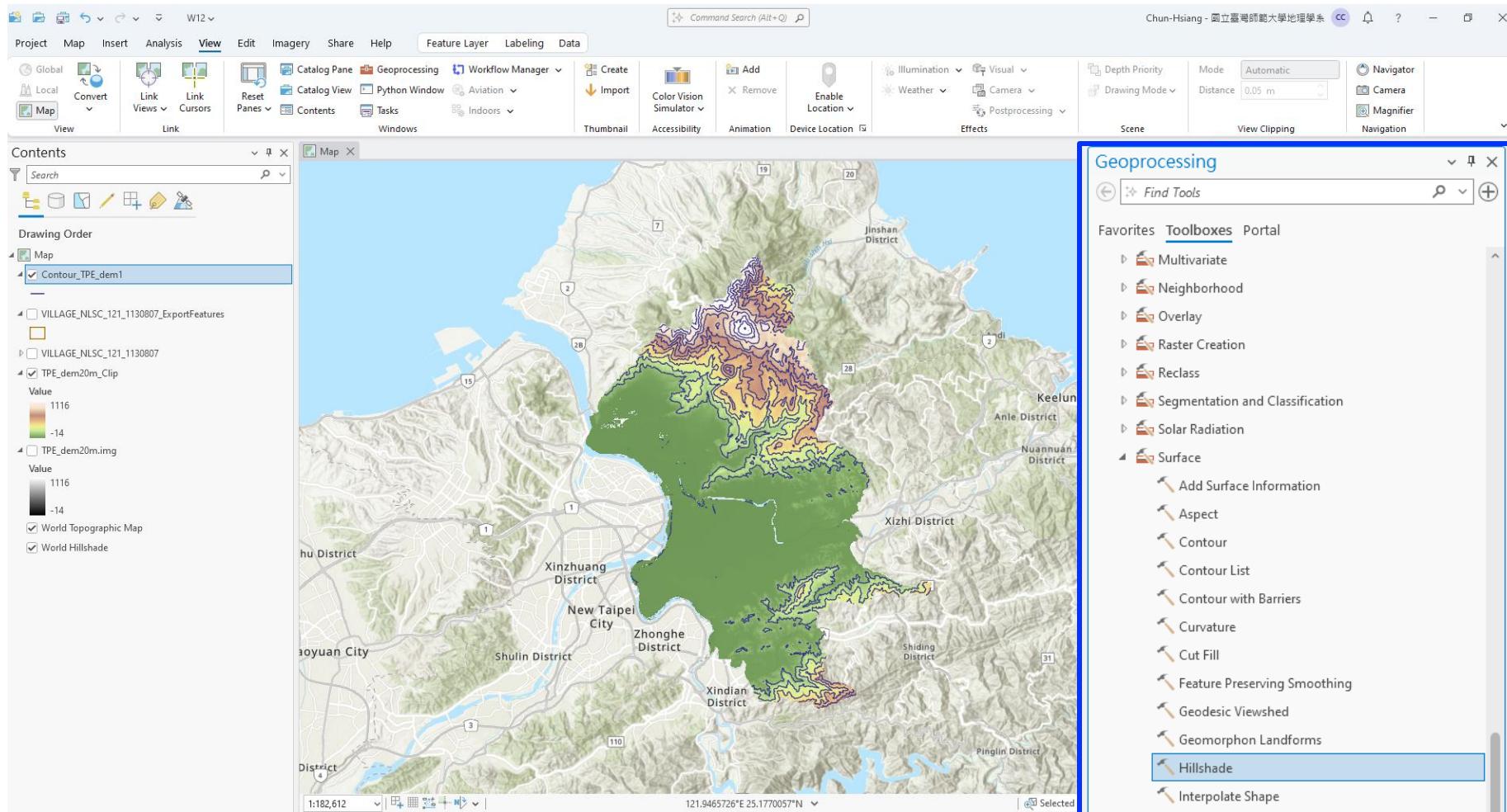
Contour



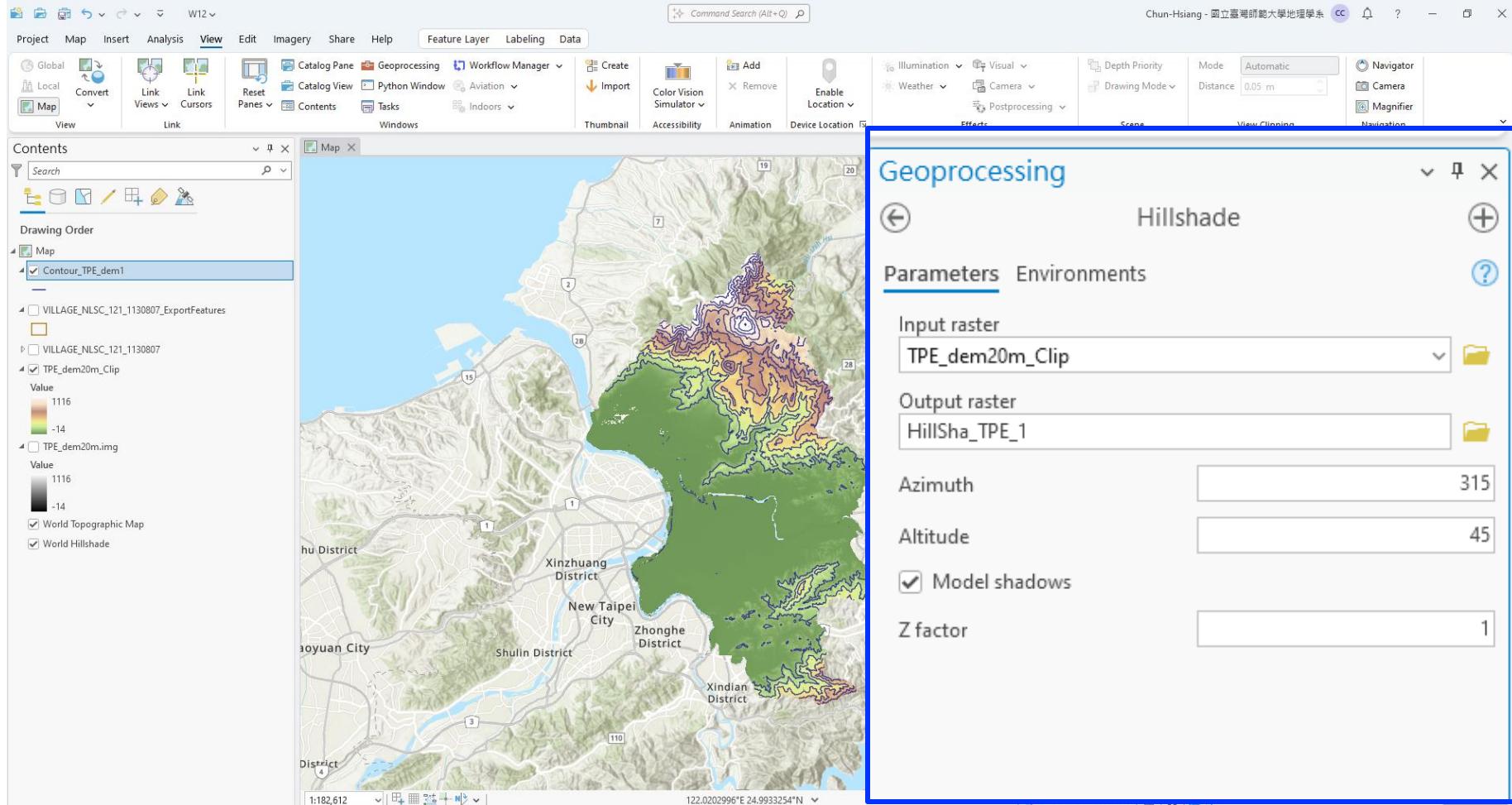
Contour



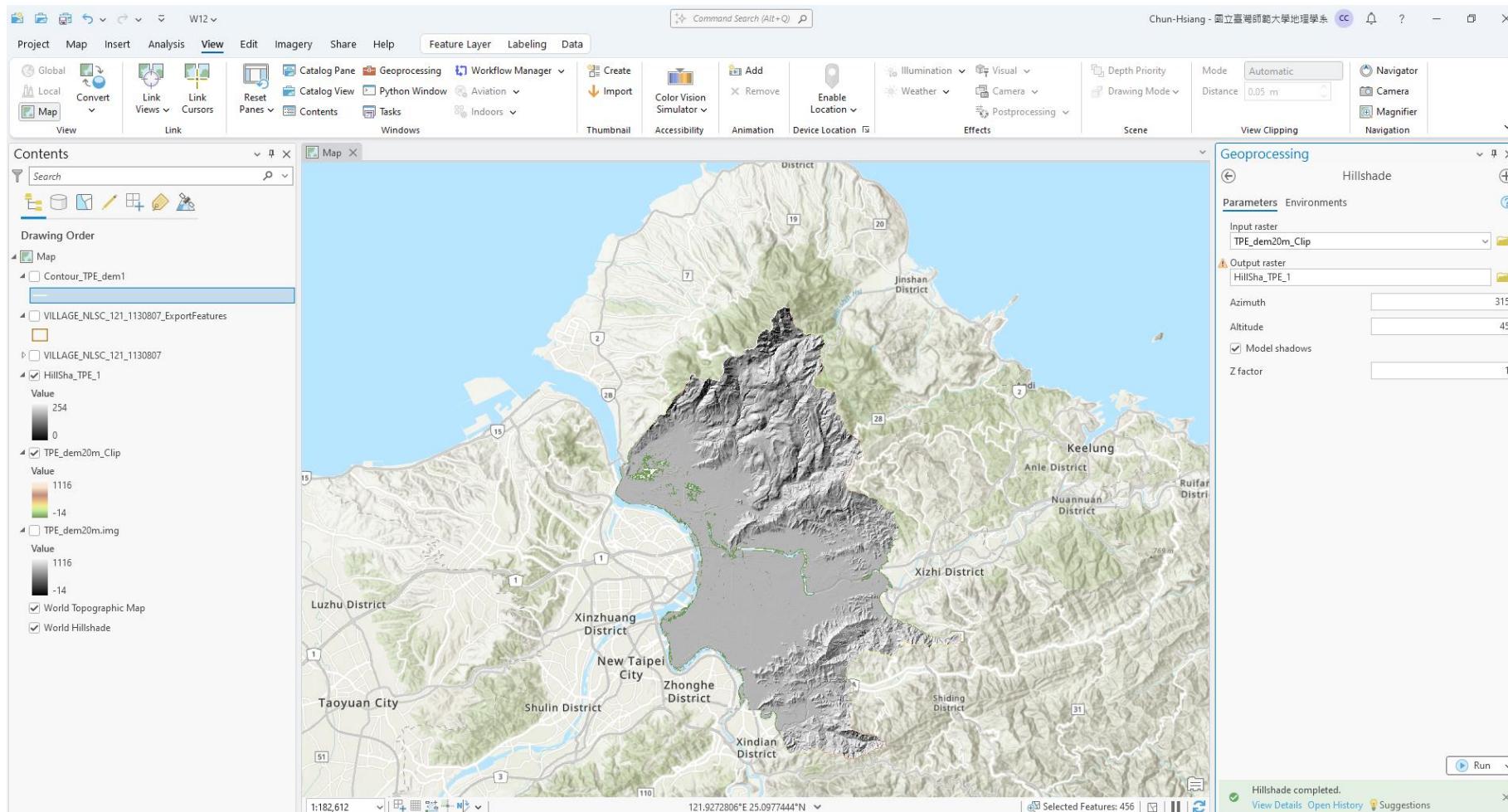
Hillshade



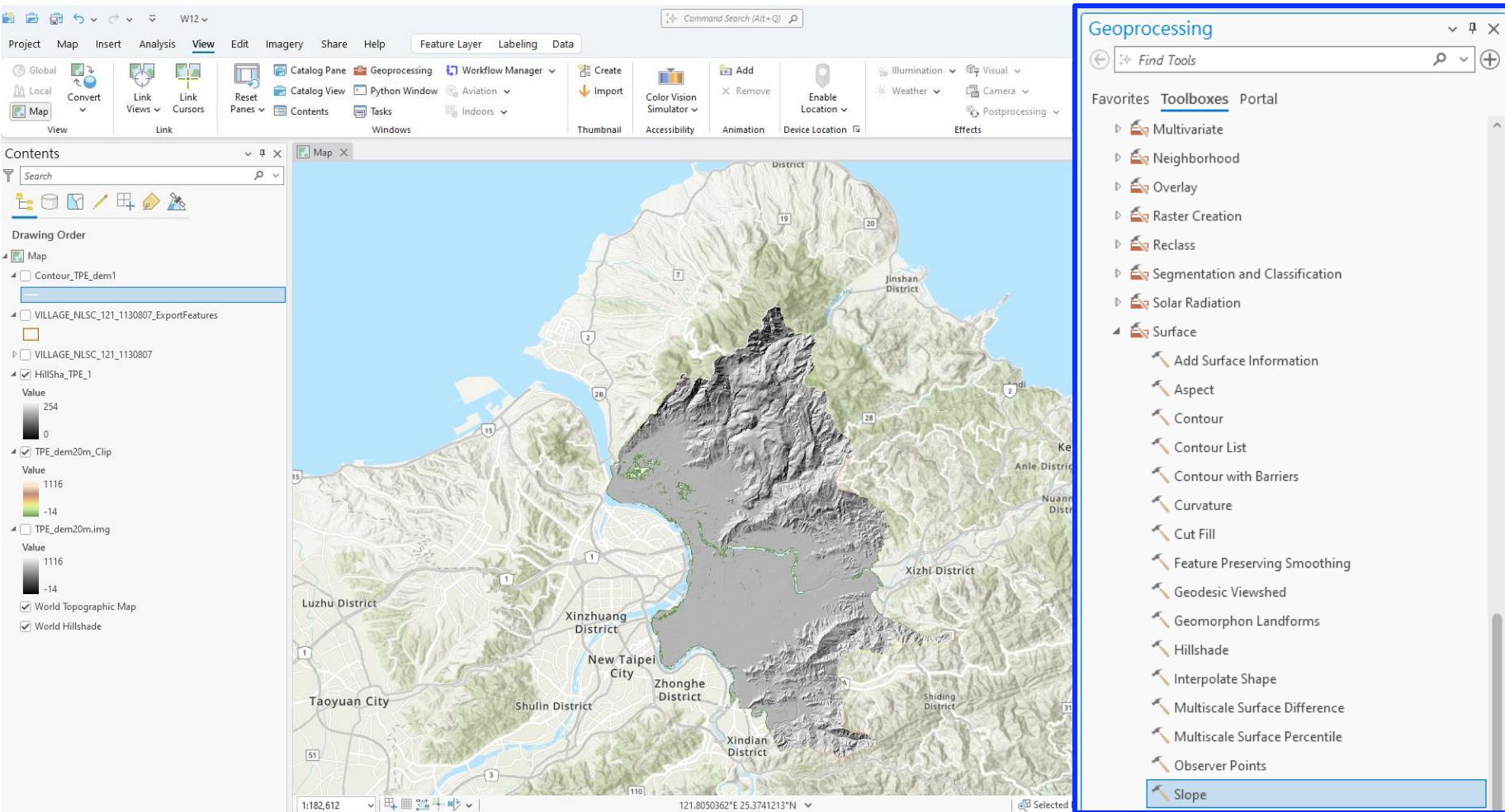
Hillshade



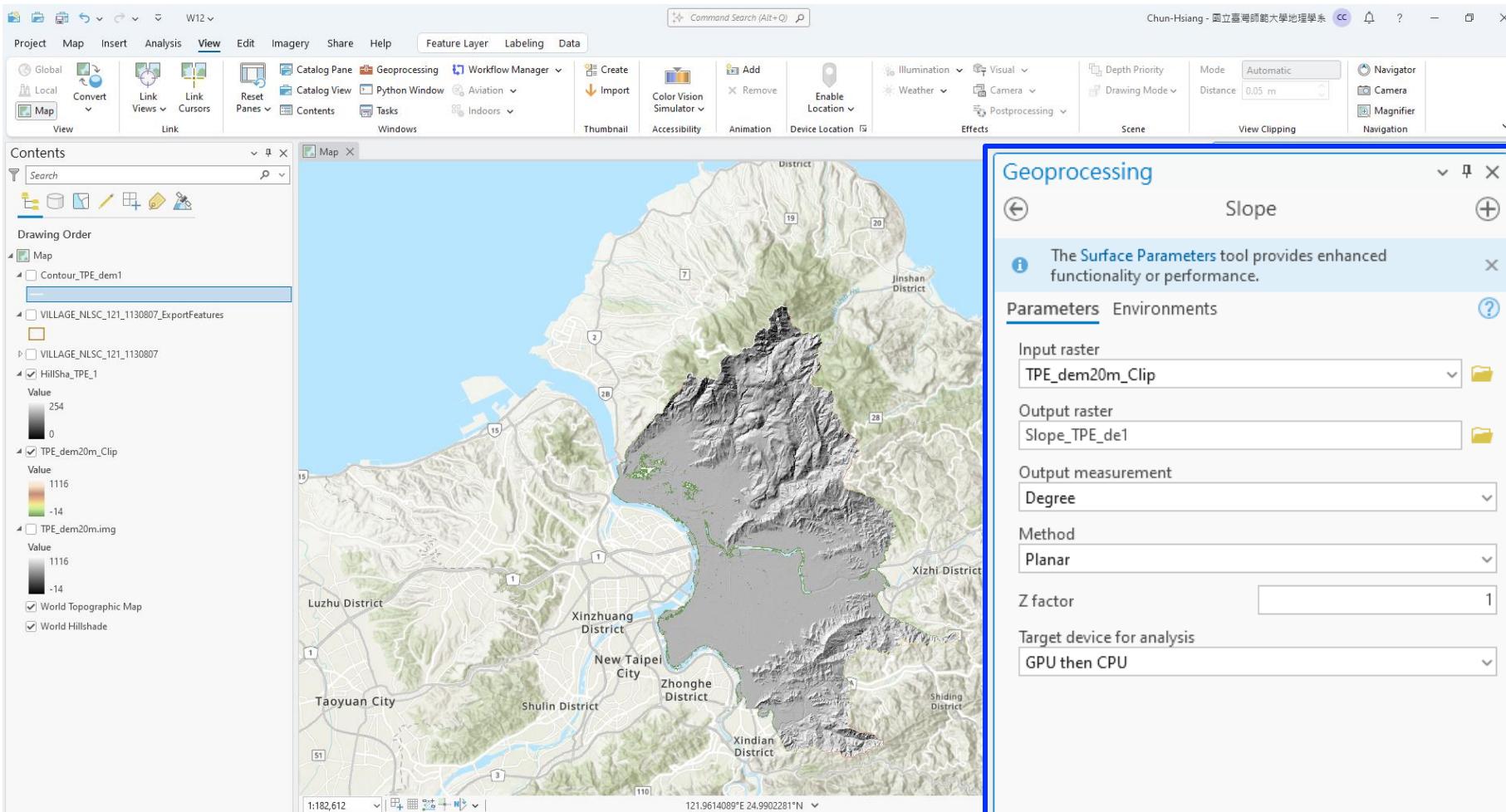
Hillshade



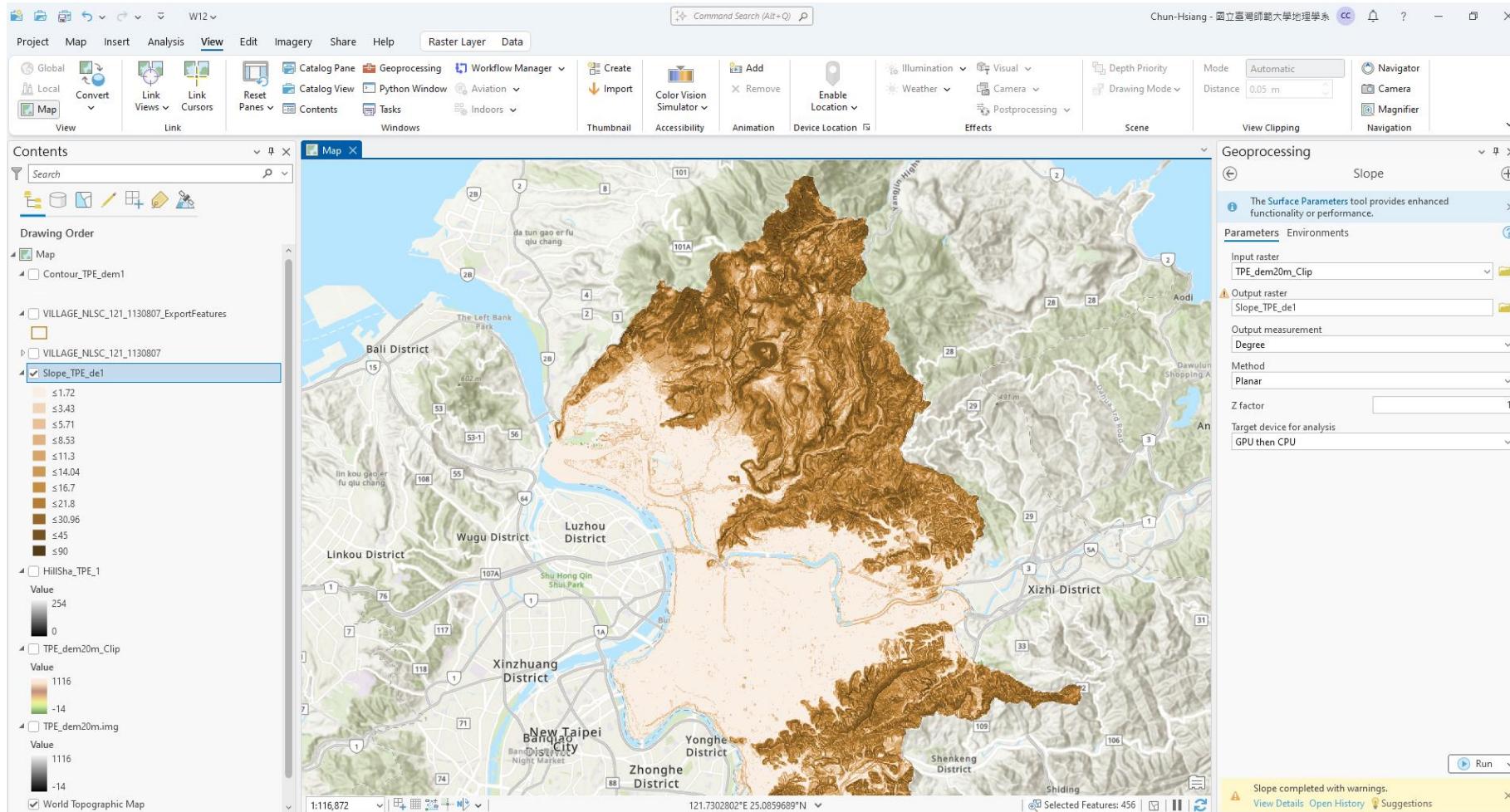
Slope



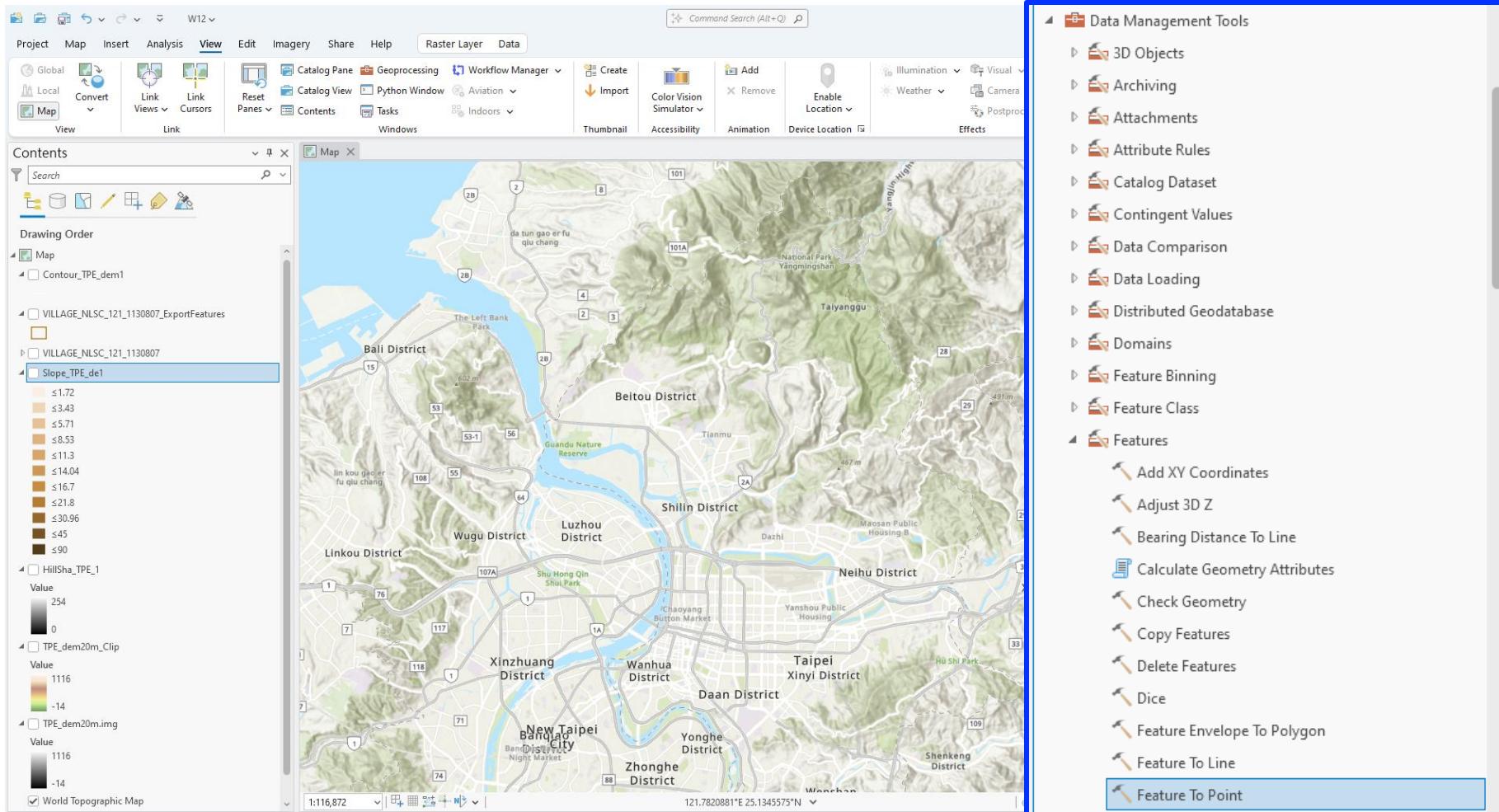
Slope



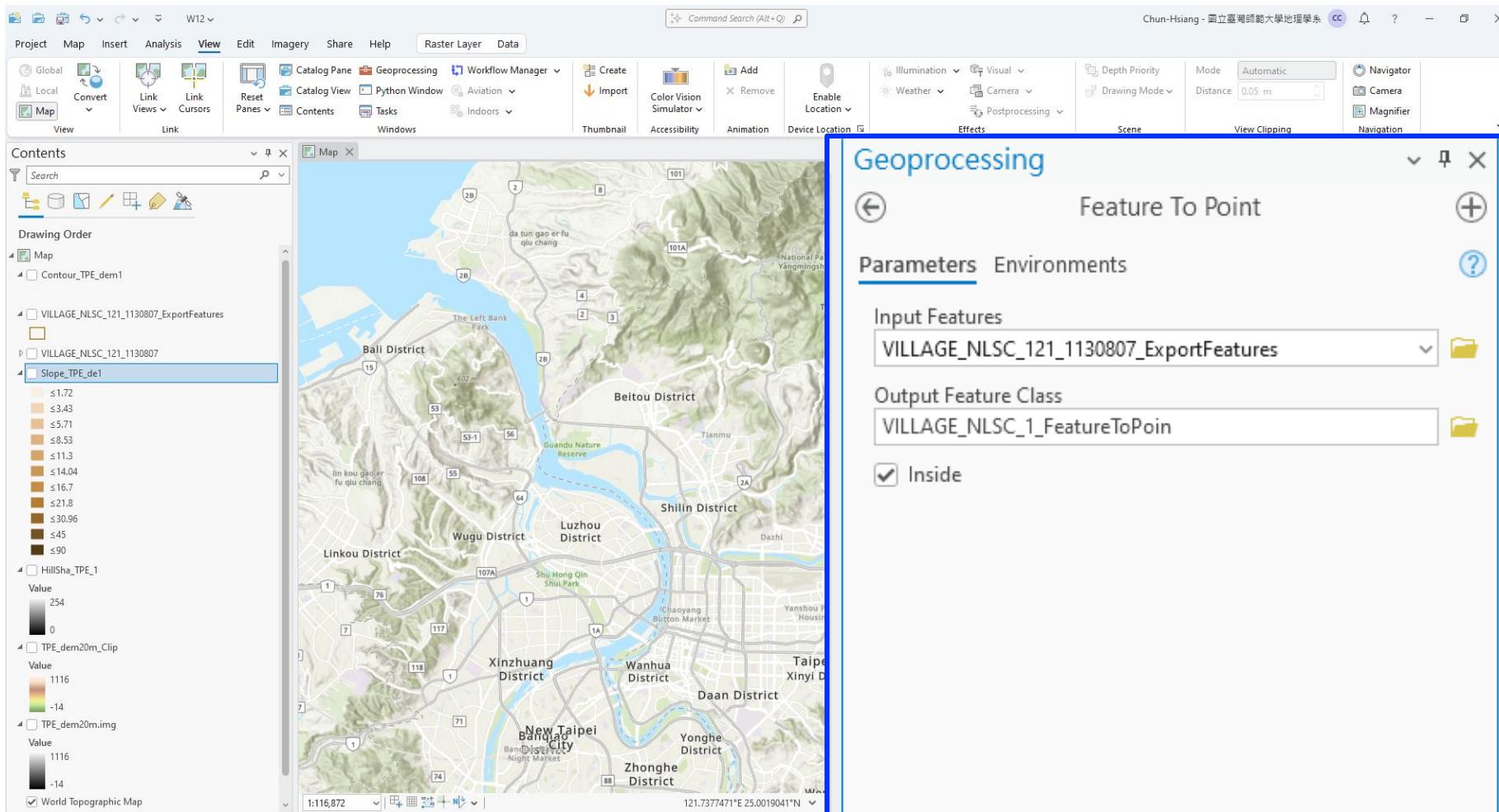
Slope



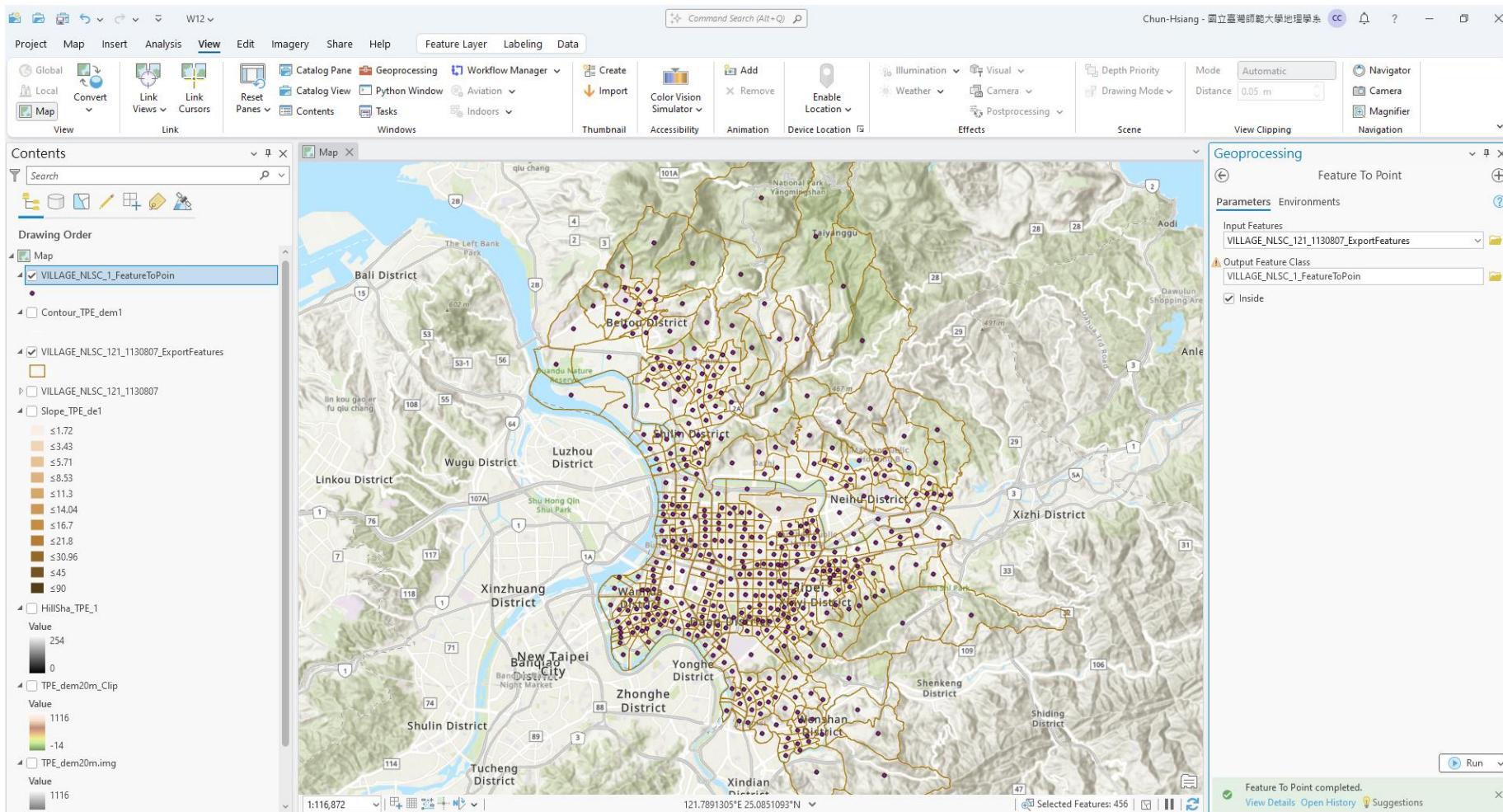
Feature To Point



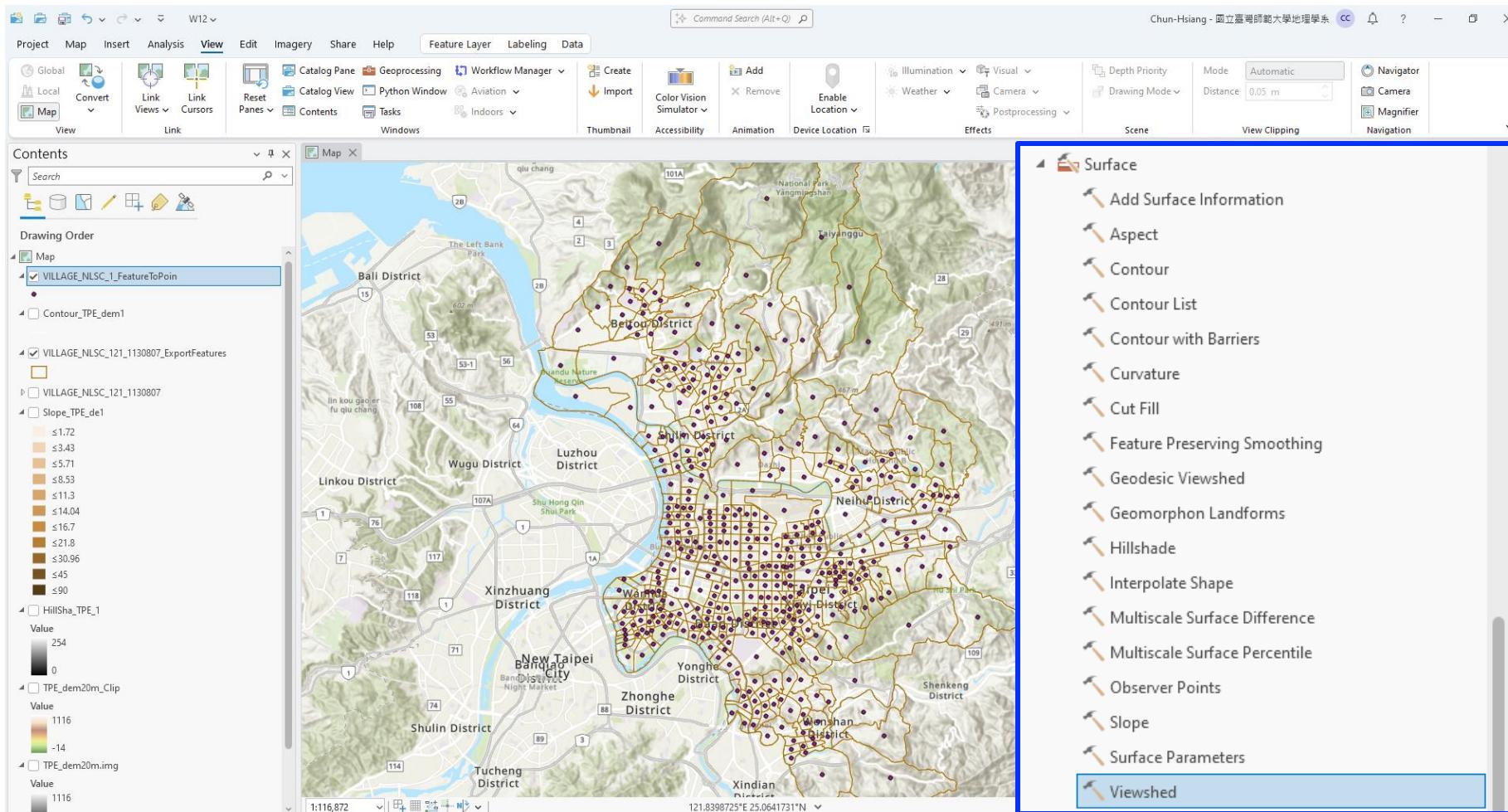
Feature To Point



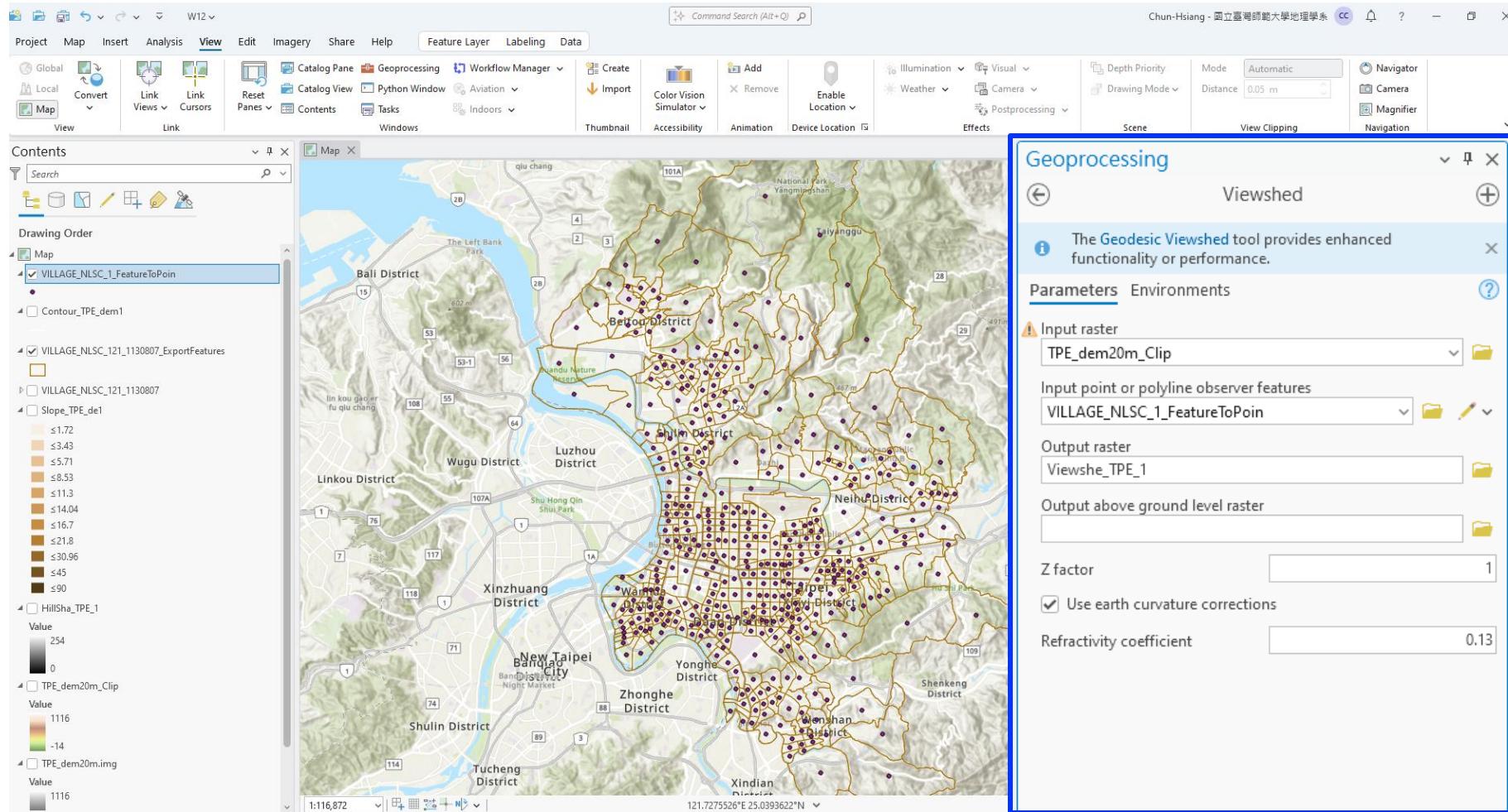
Feature To Point



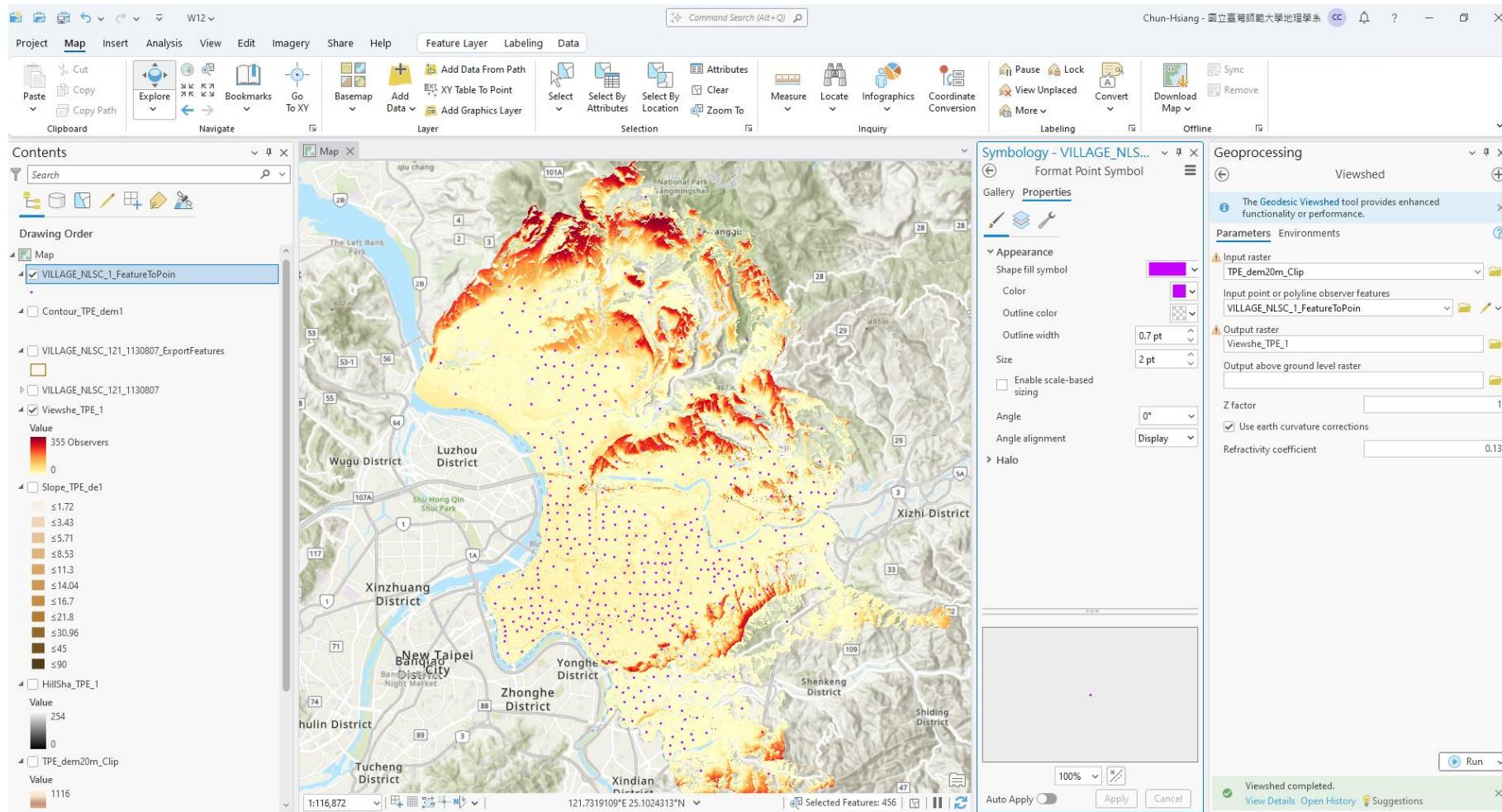
Viewshed



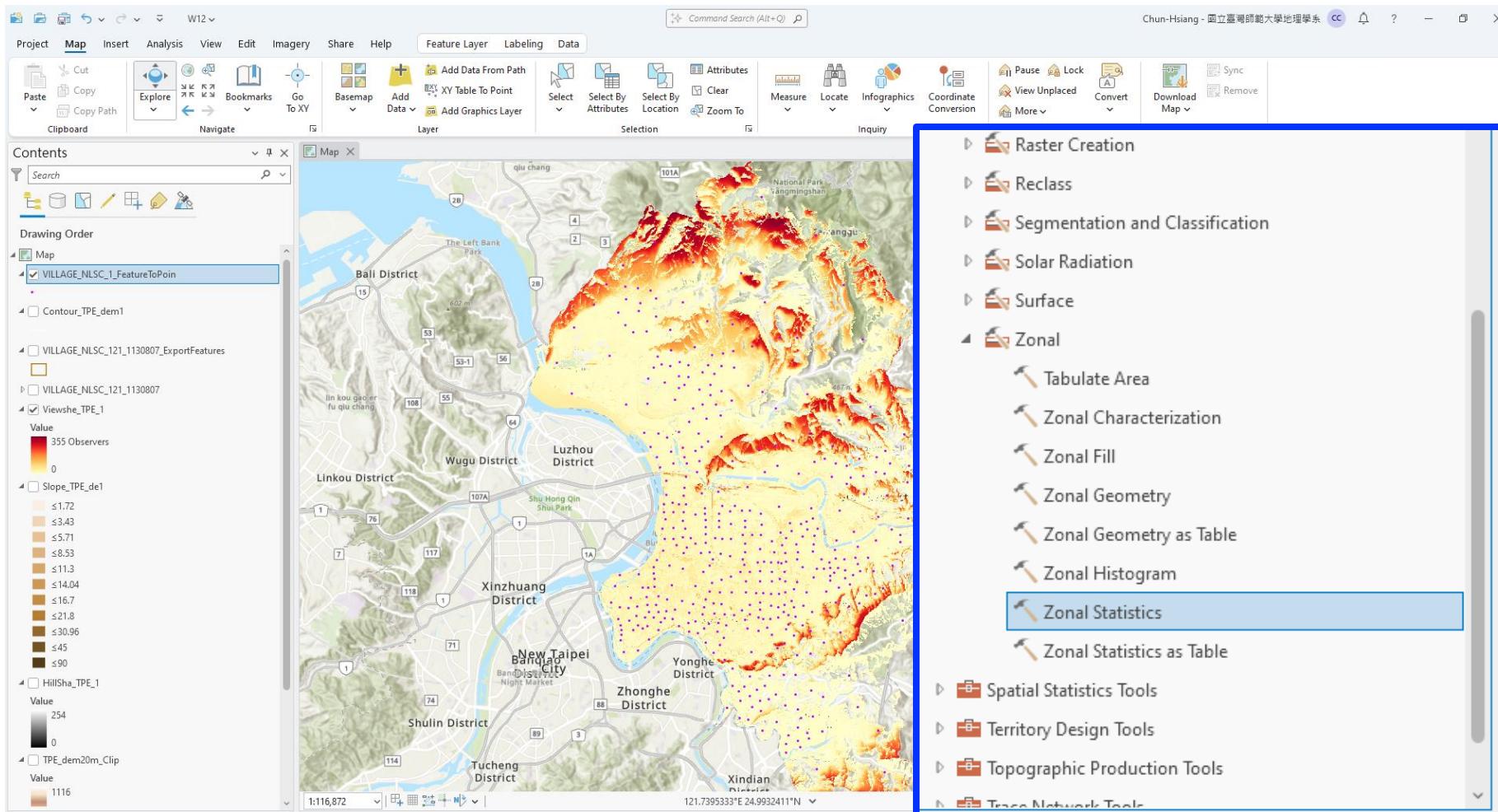
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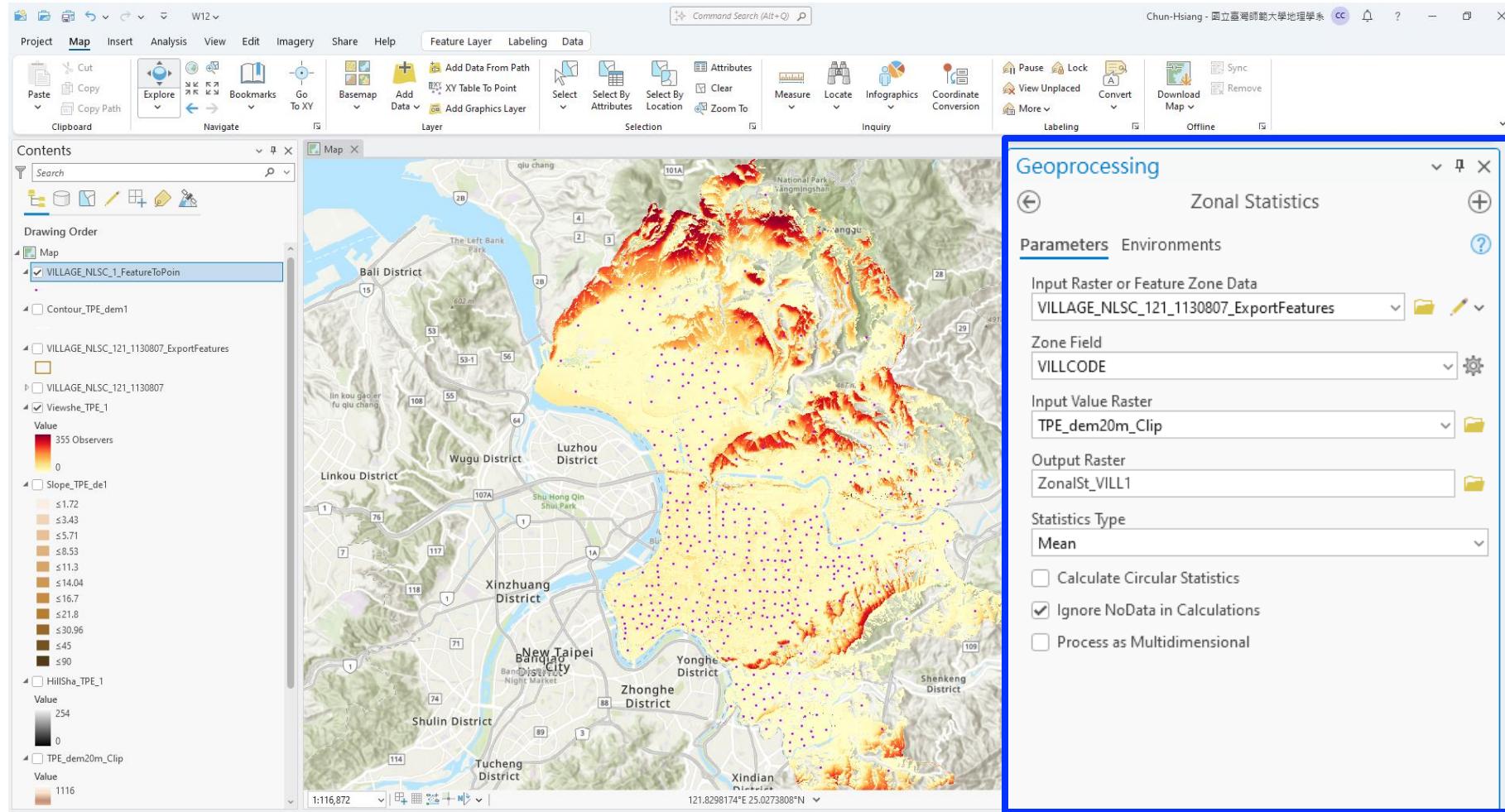
Viewshed



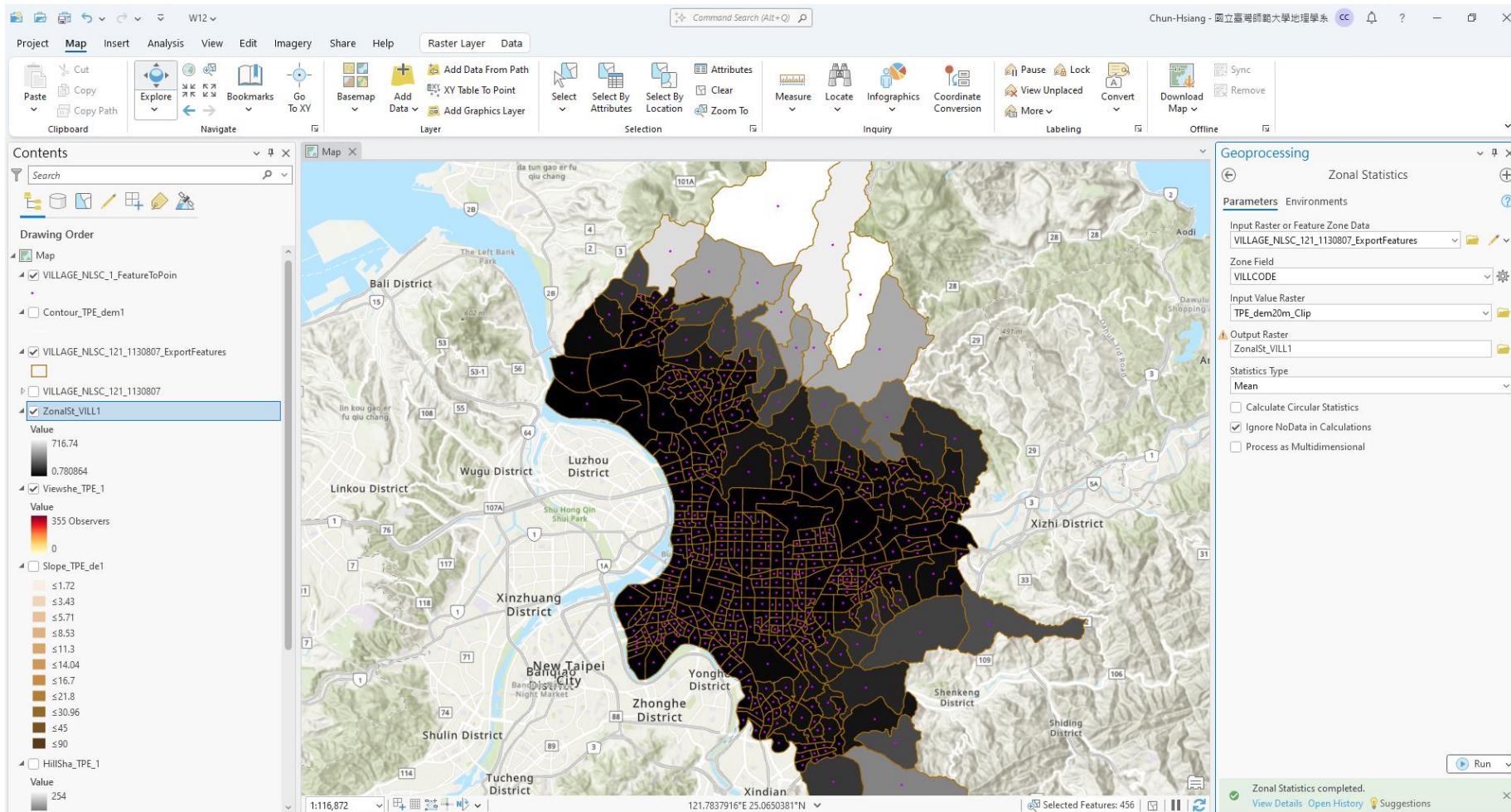
Zonal Statistics



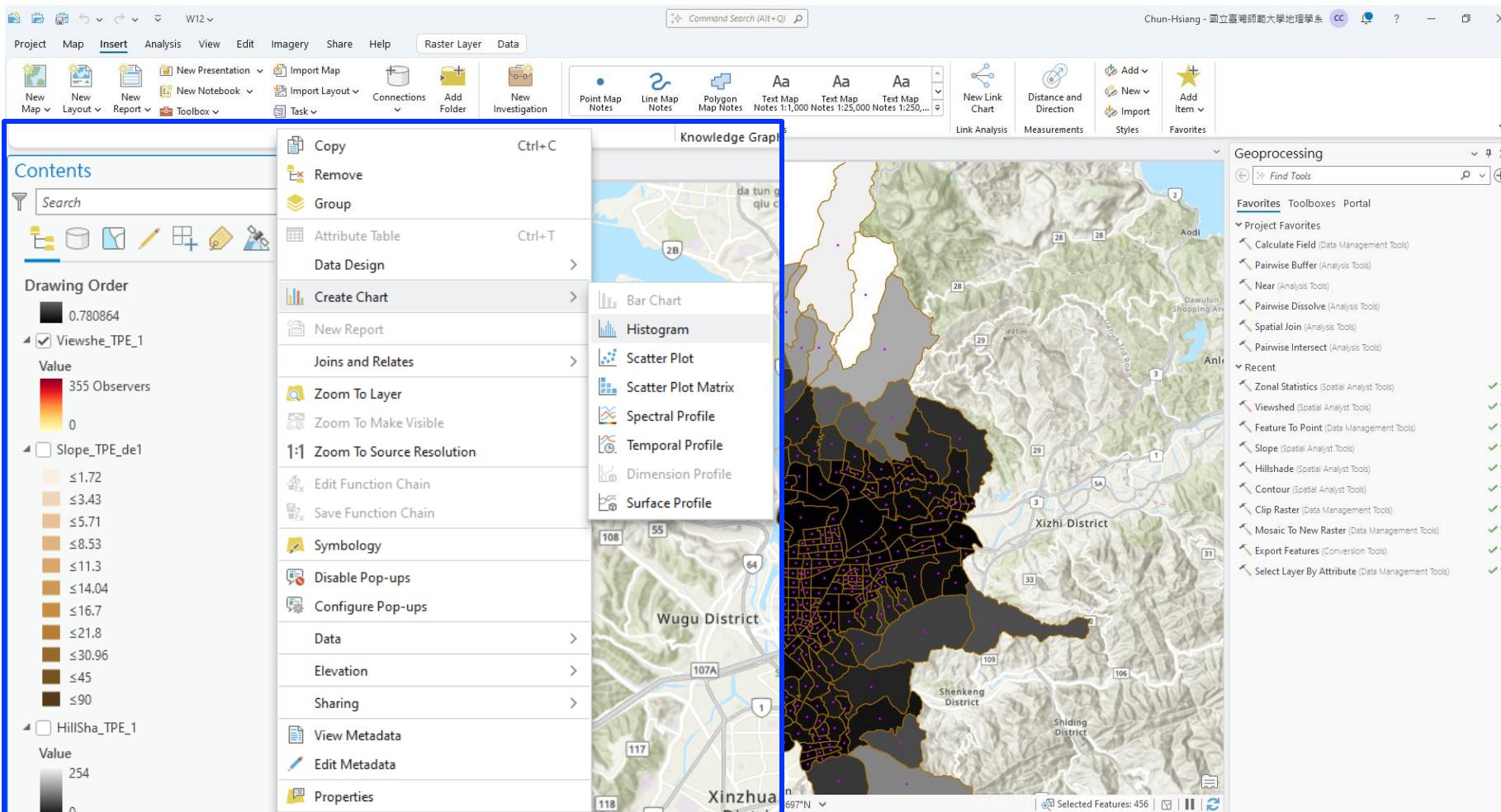
Zonal Statistics



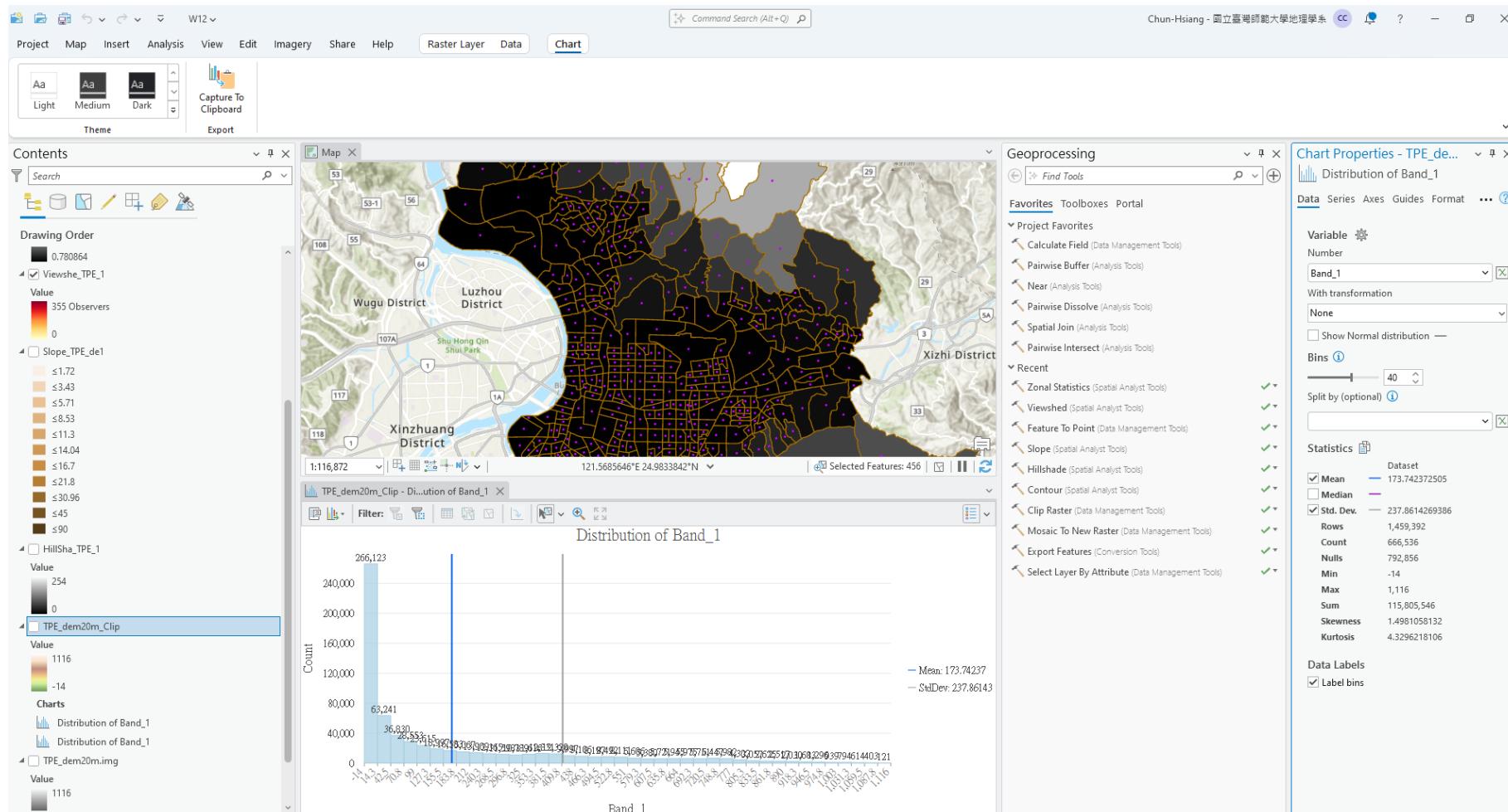
Zonal Statistics



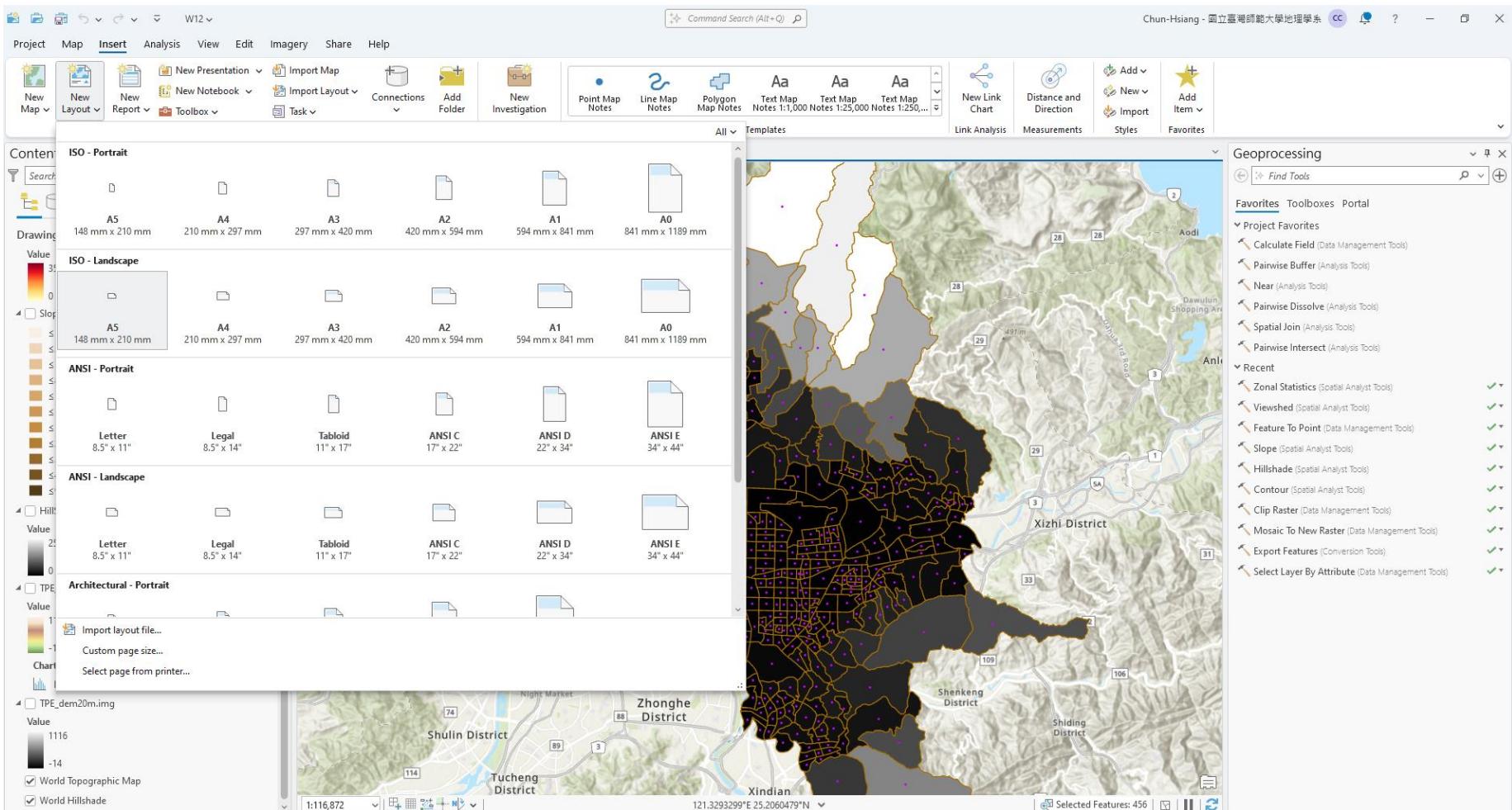
Create Chart | Histogram



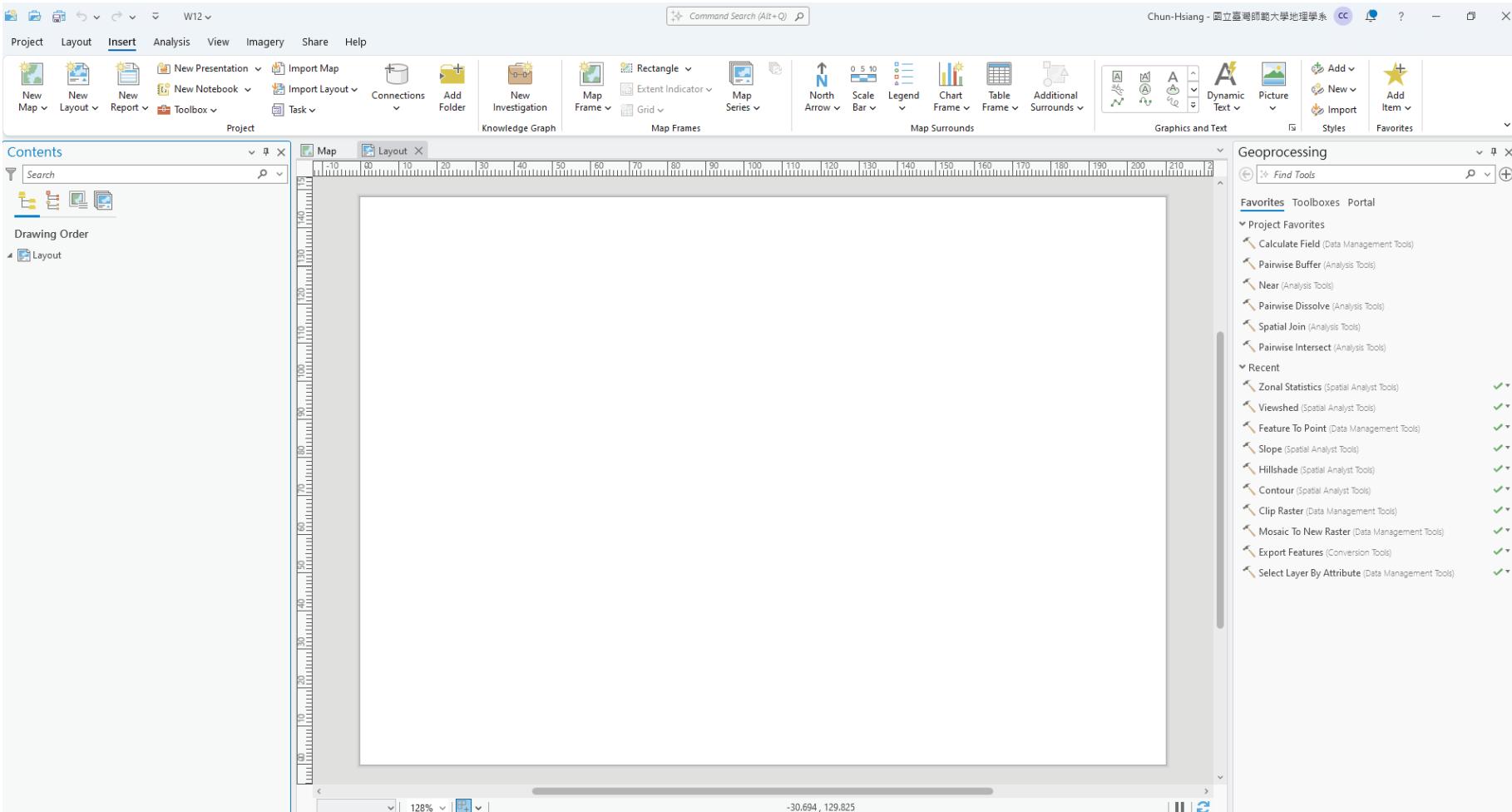
Create Chart | Histogram



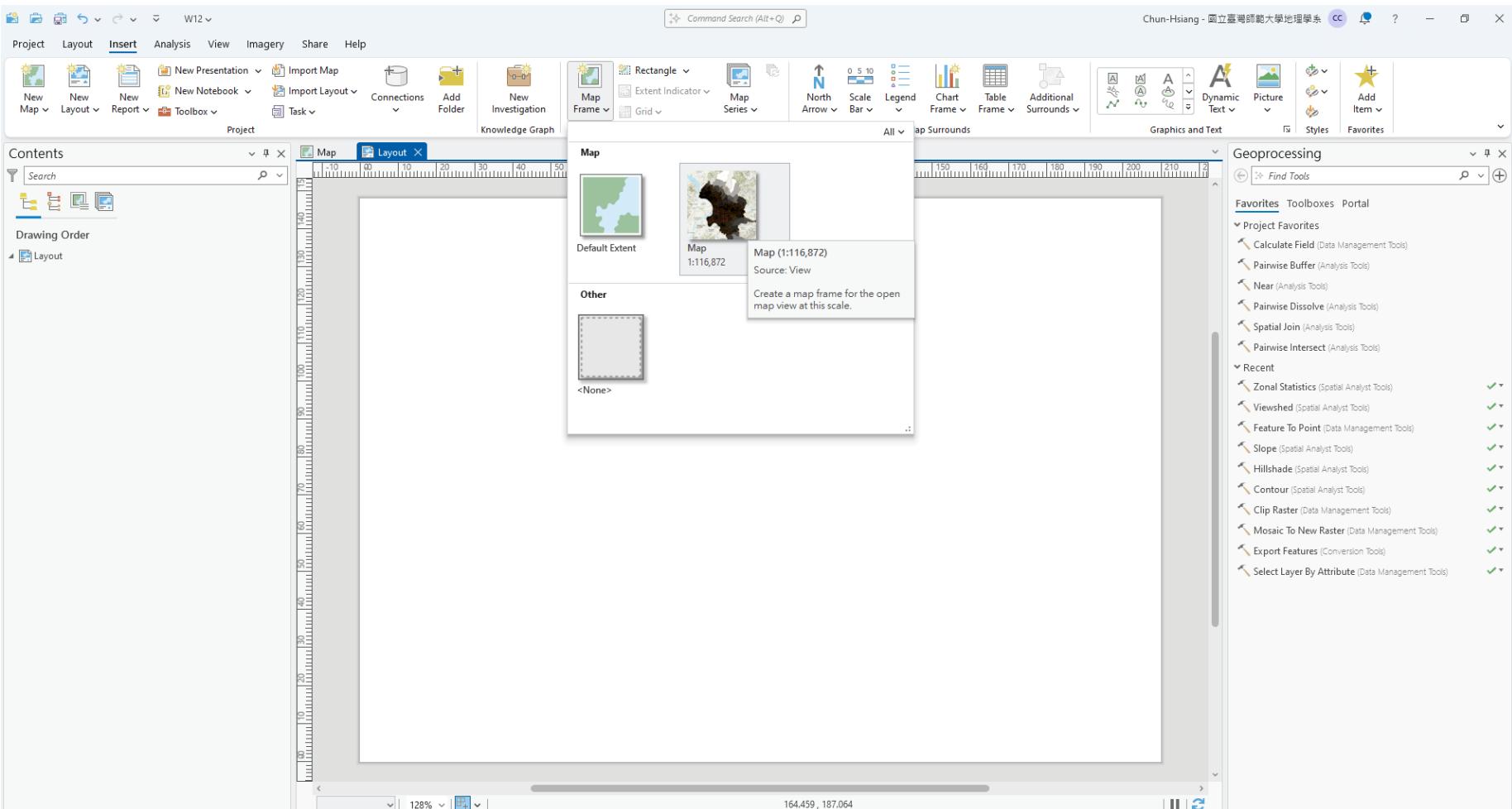
Map Layout



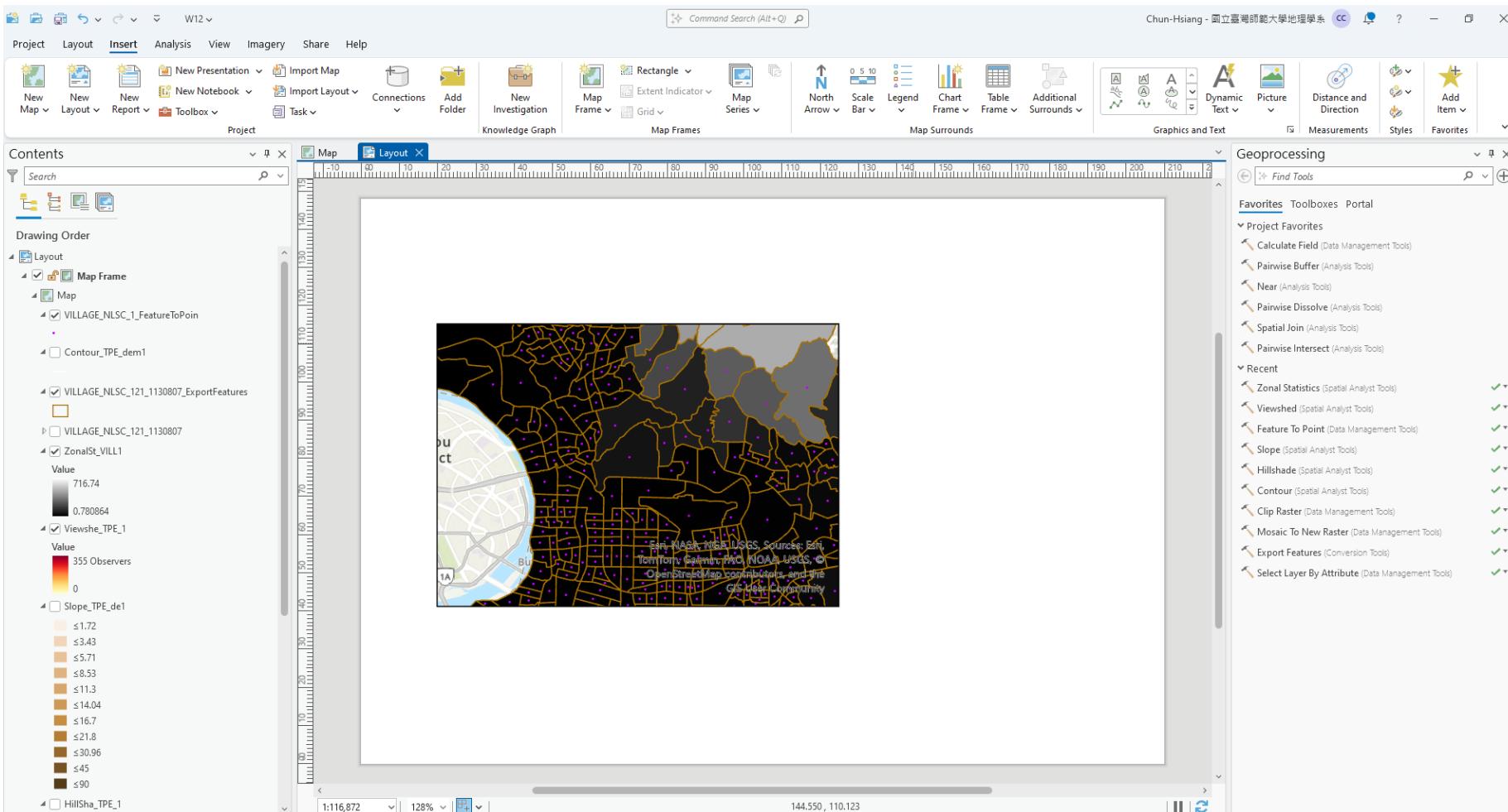
Map Layout



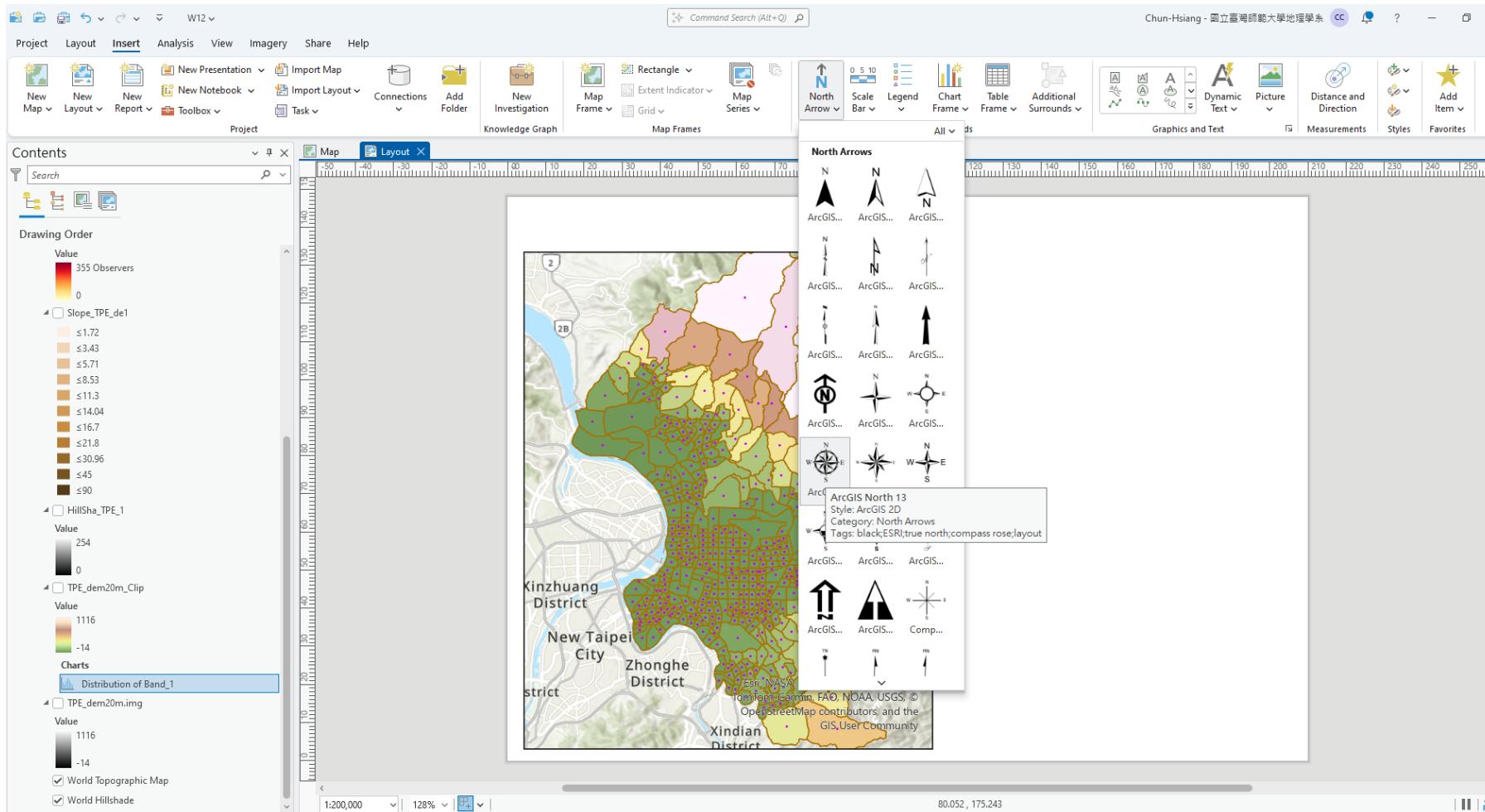
Map Layout



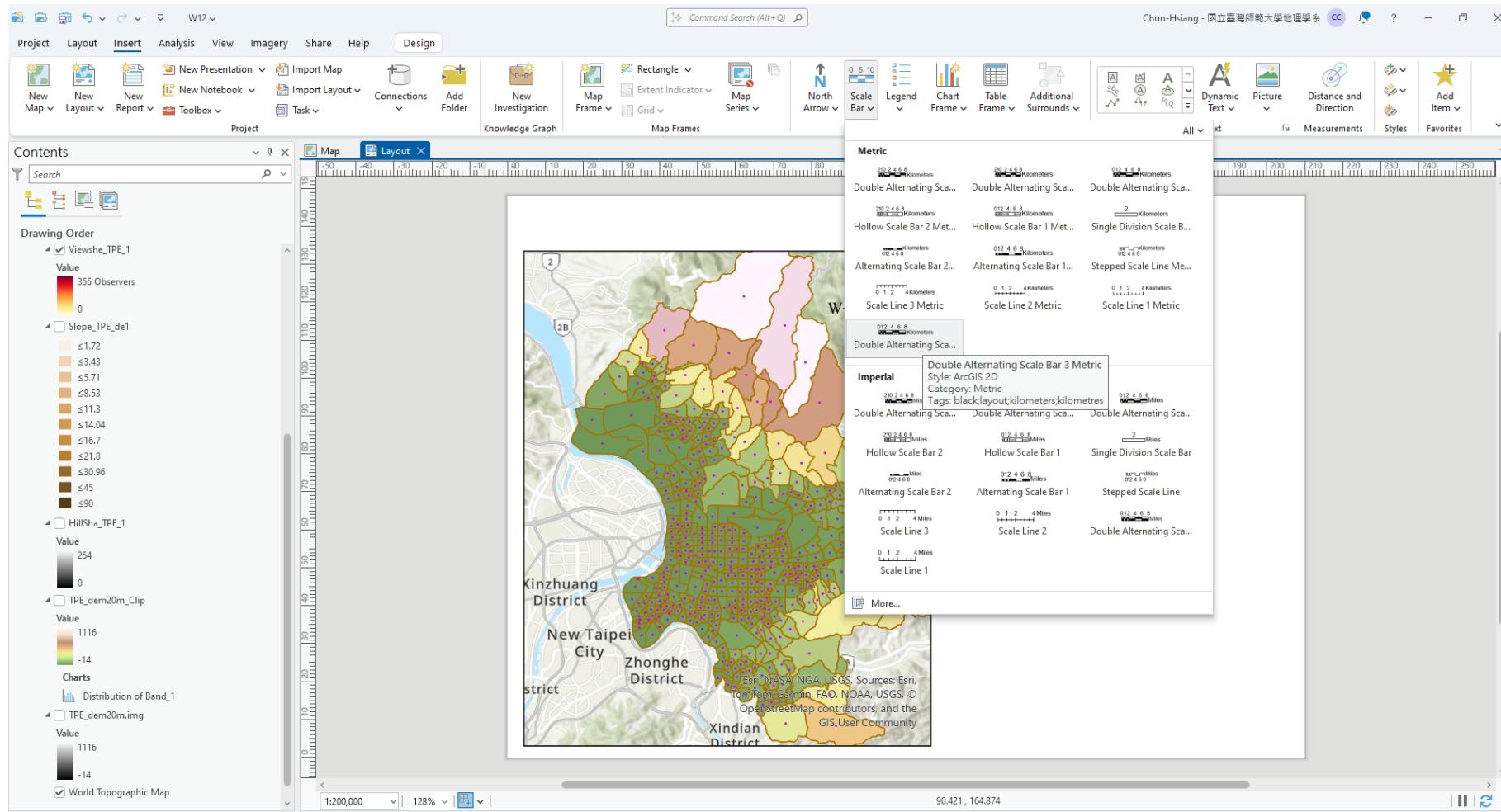
Map Layout



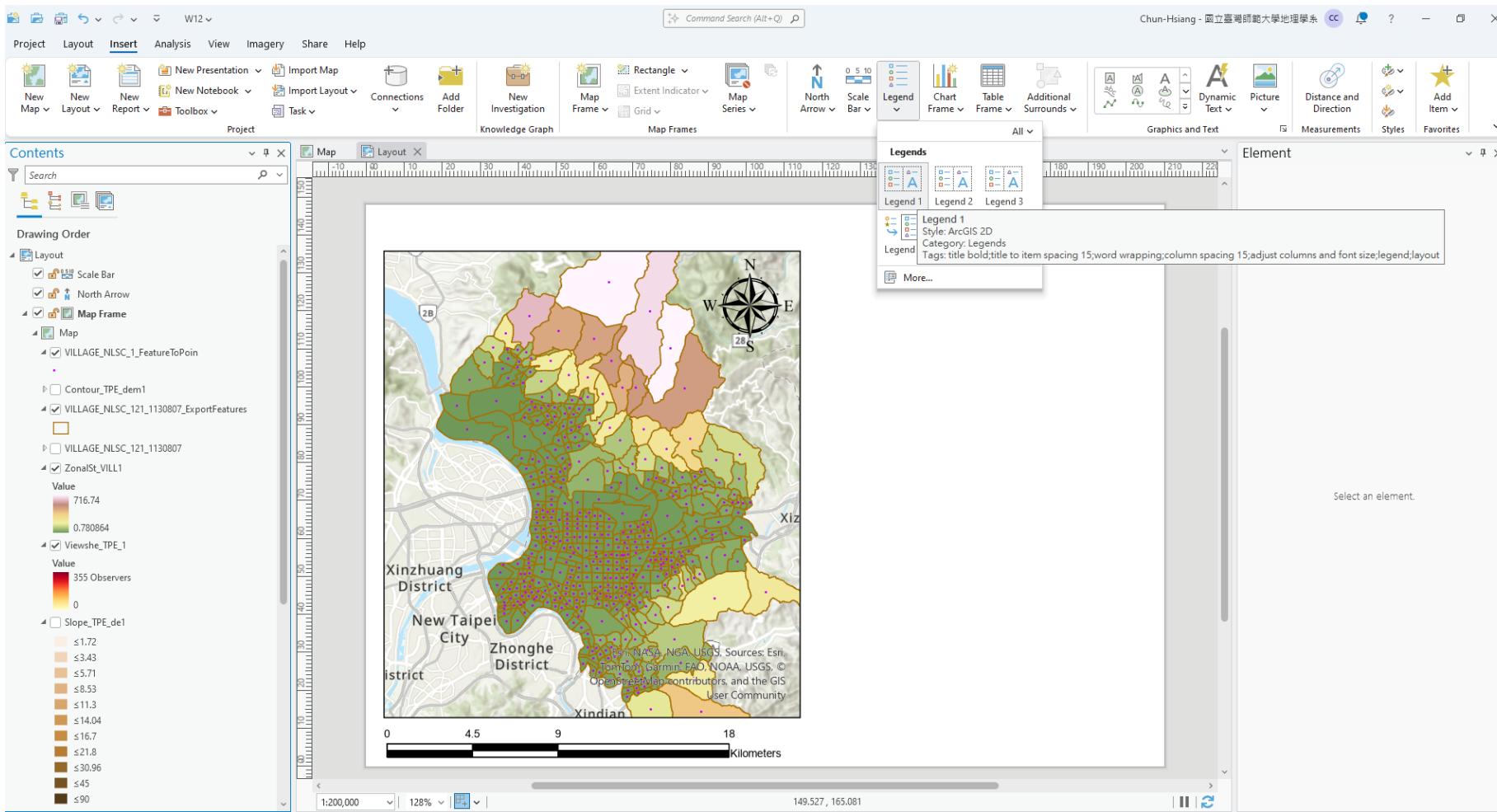
North Arrow



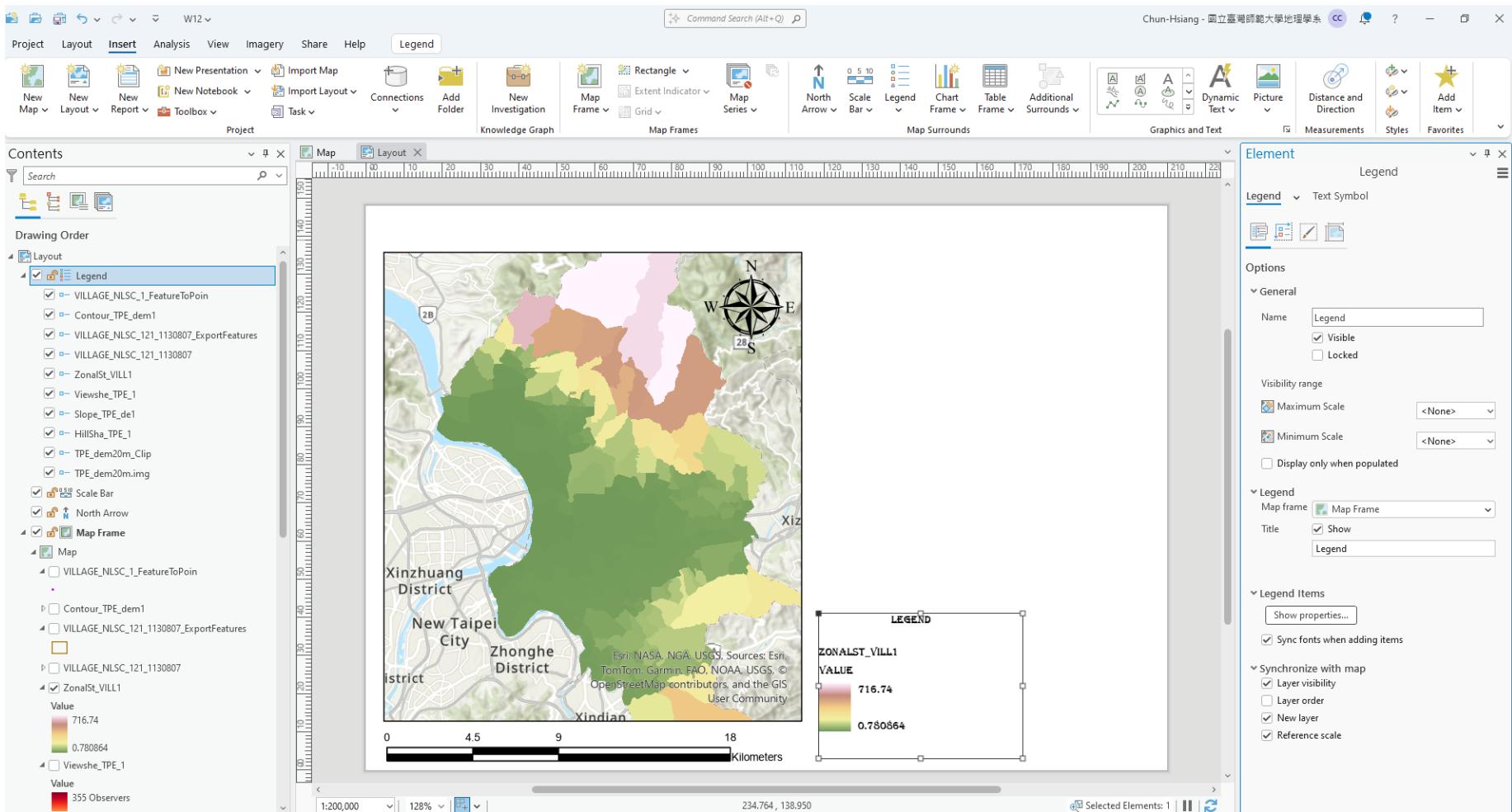
Scale Bar



Legend



Legend



Legend

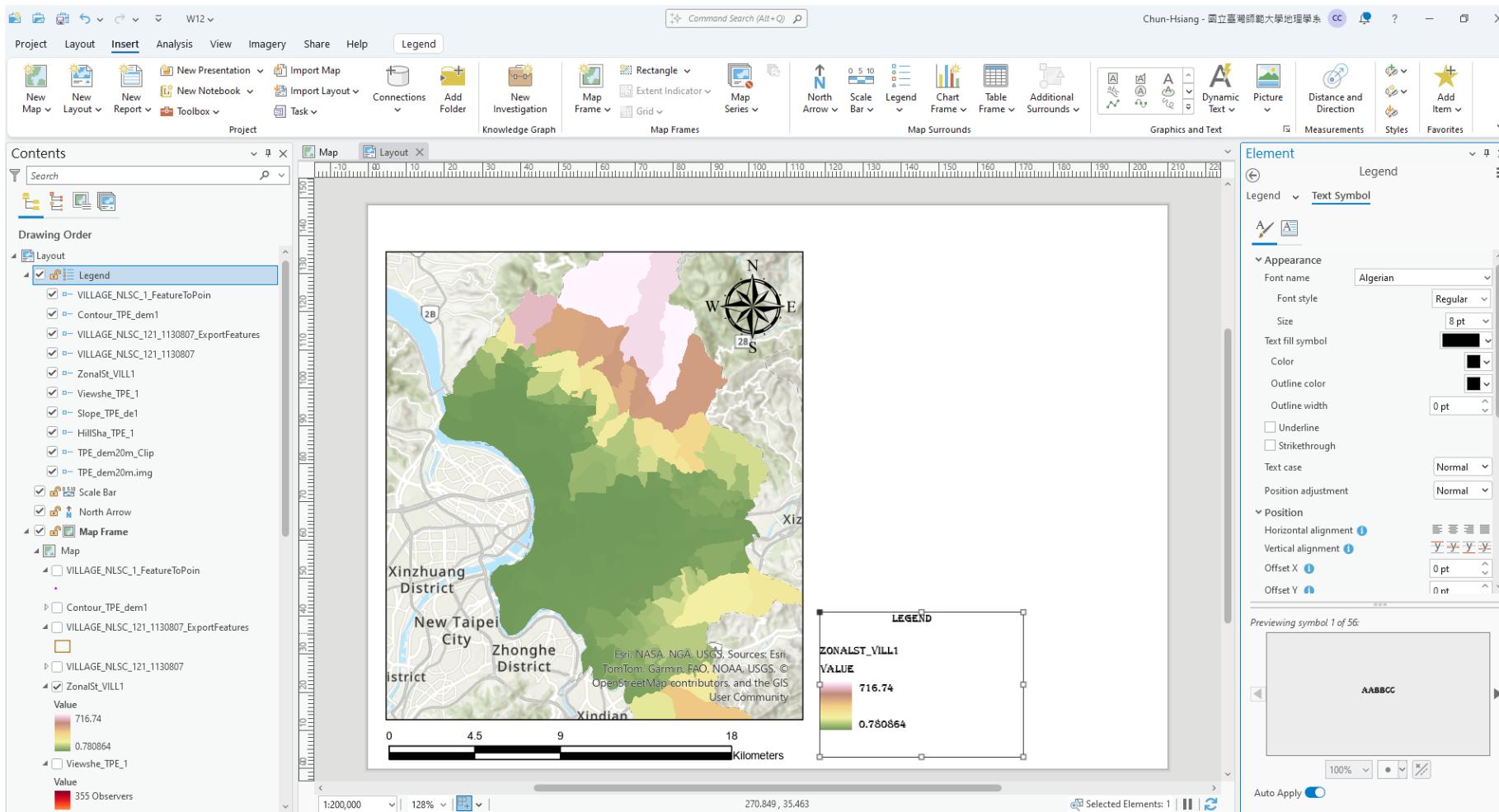


Chart Frame

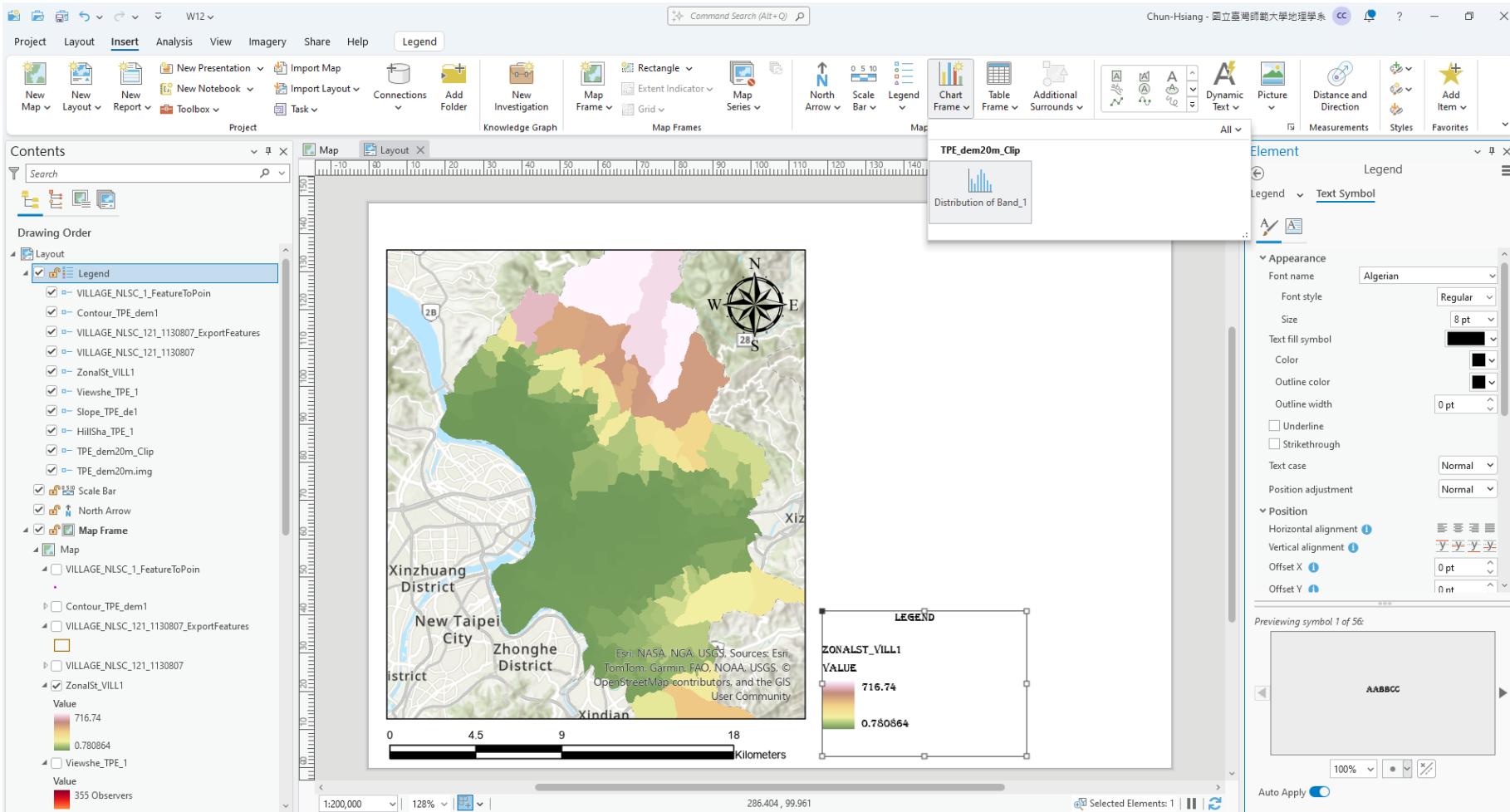


Chart | Text and Font

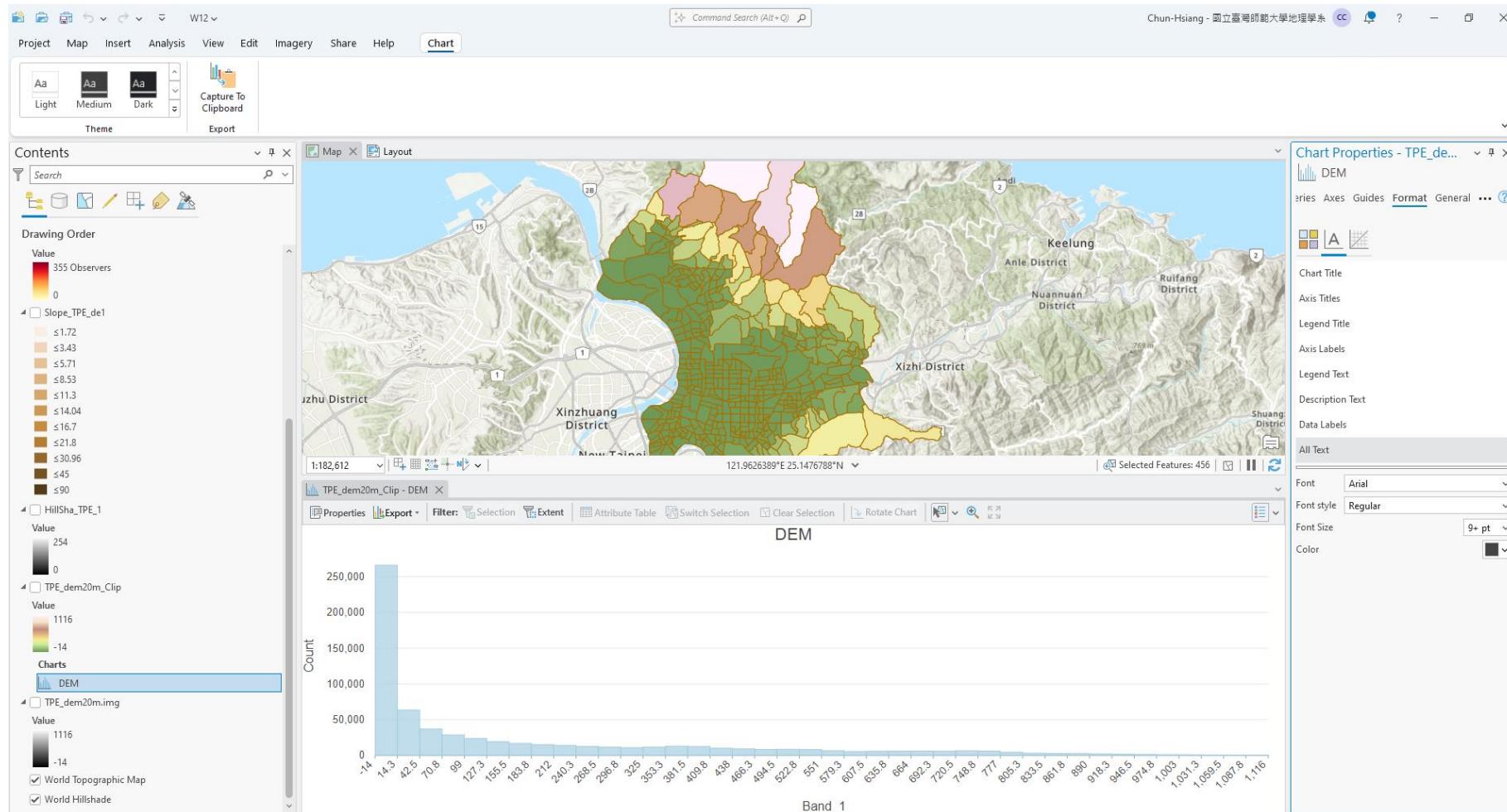


Chart Properties

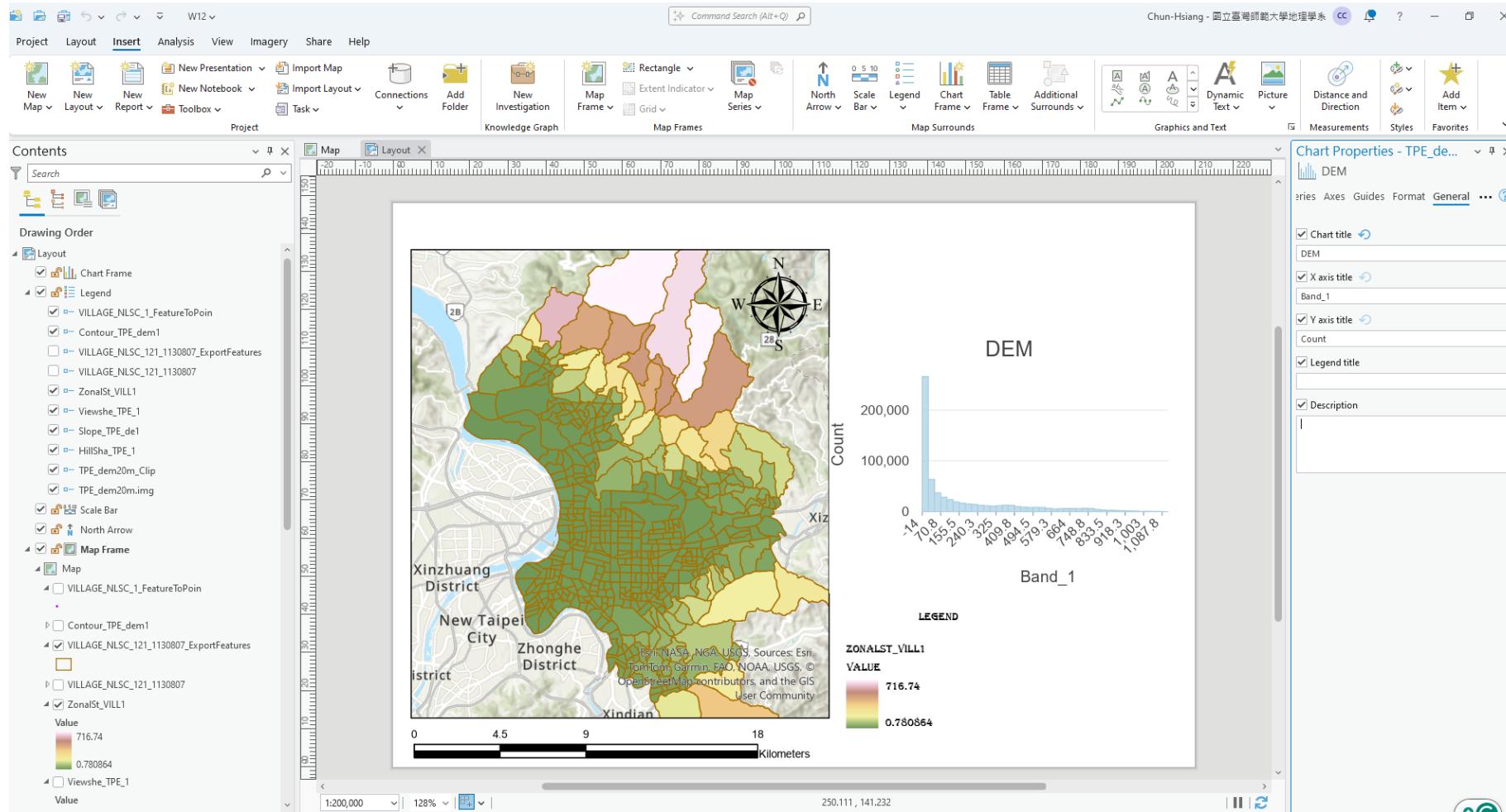
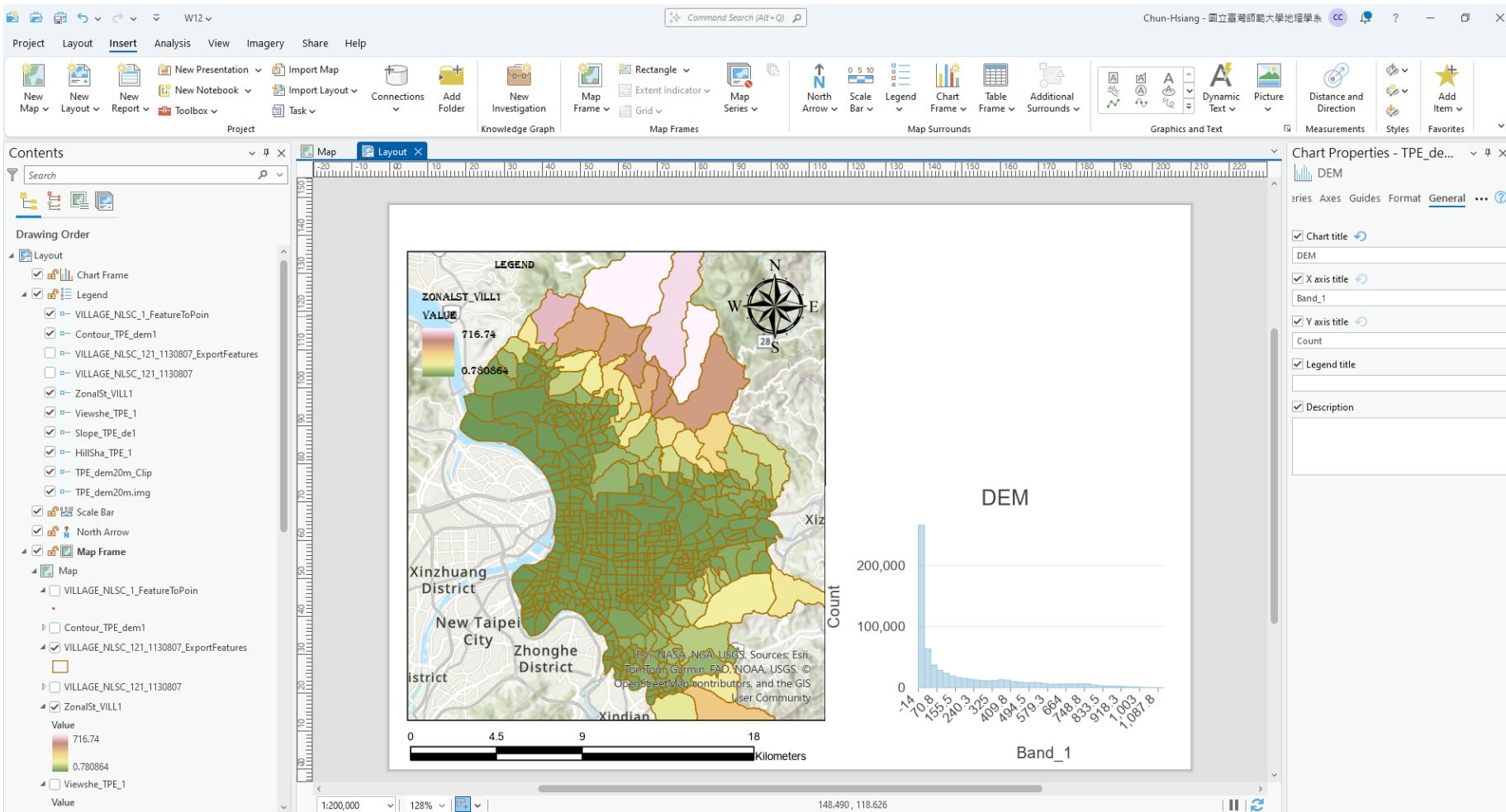
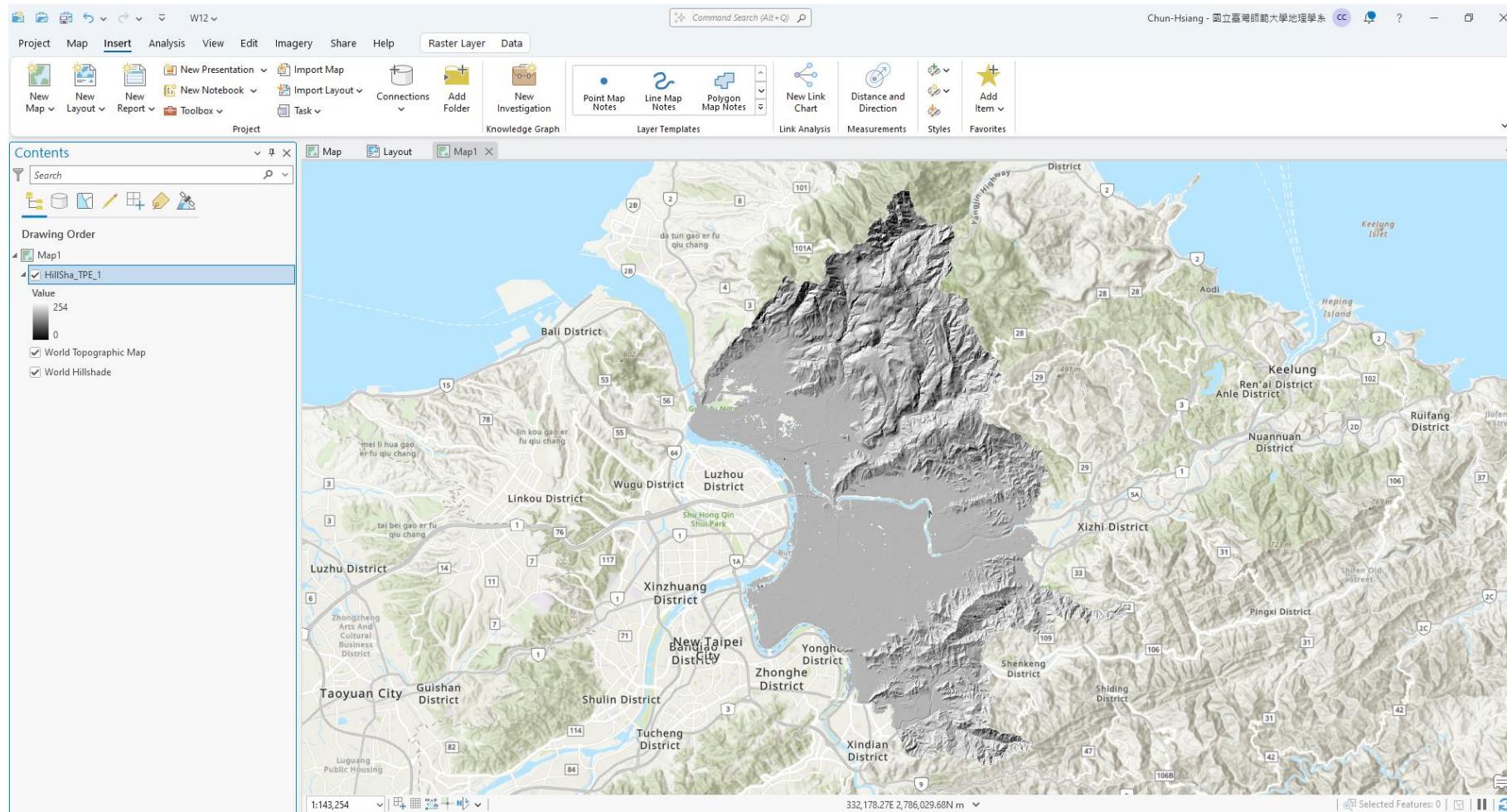


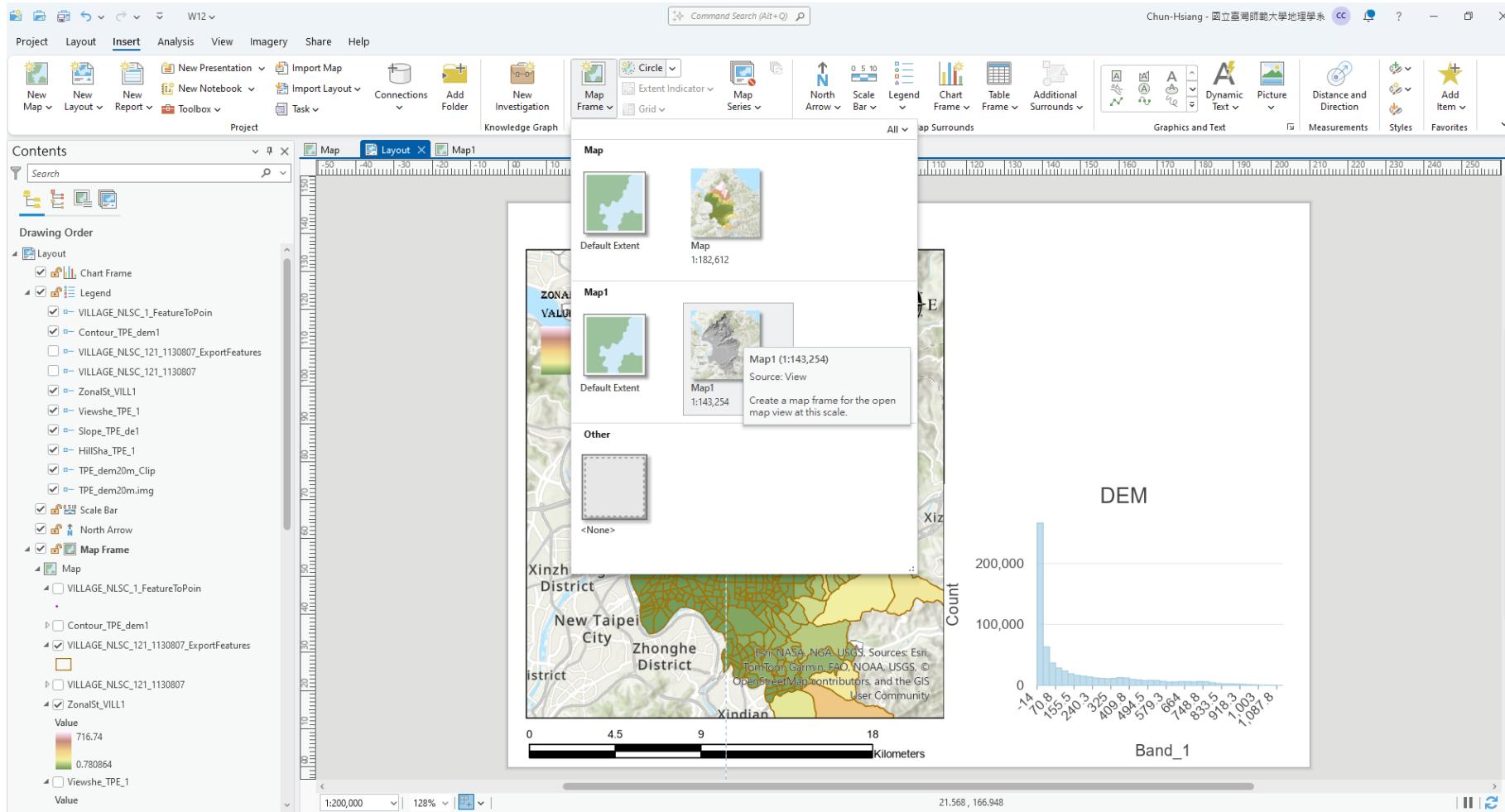
Chart Properties | Title



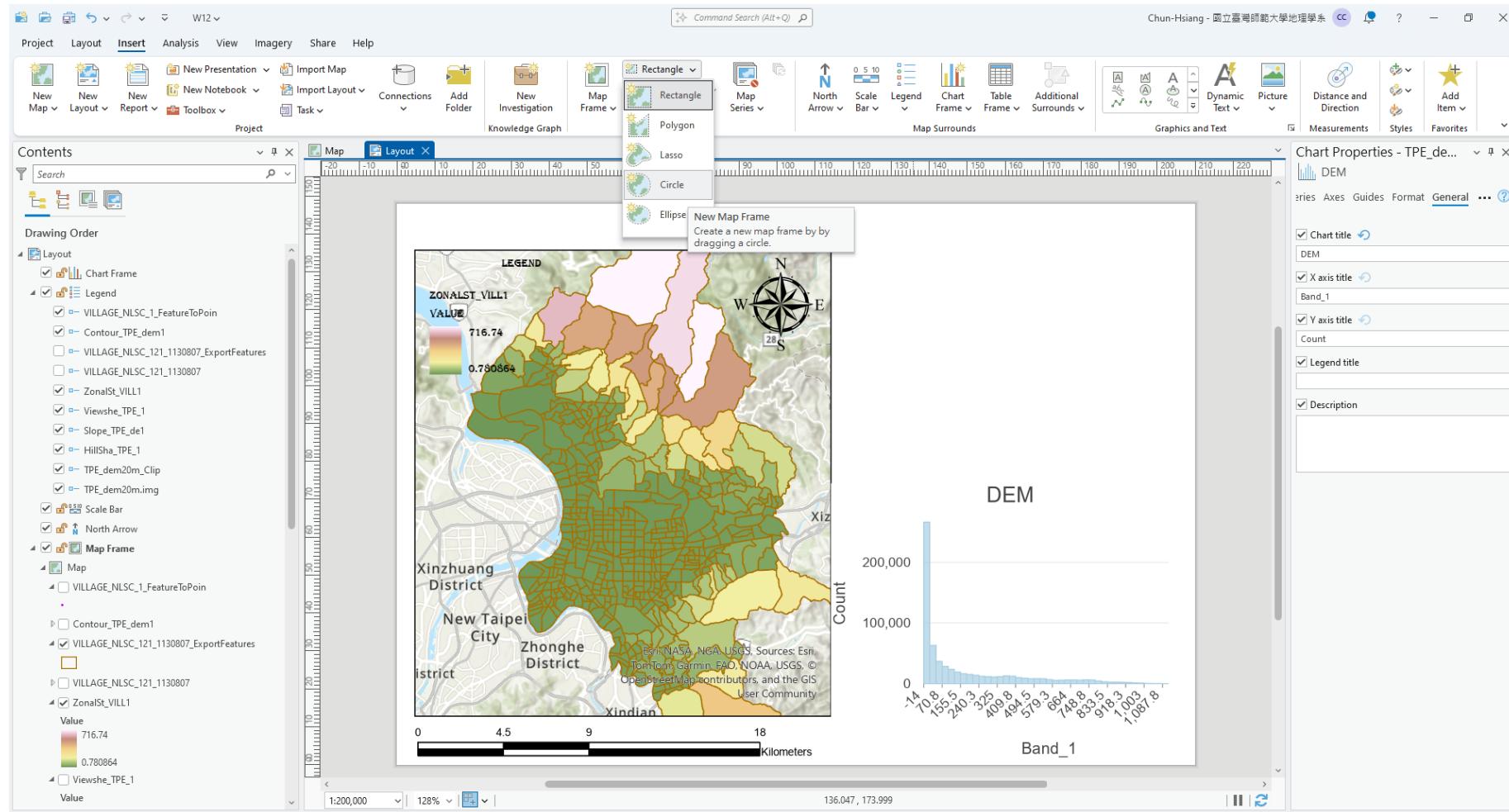
New Map | Add Hillshade



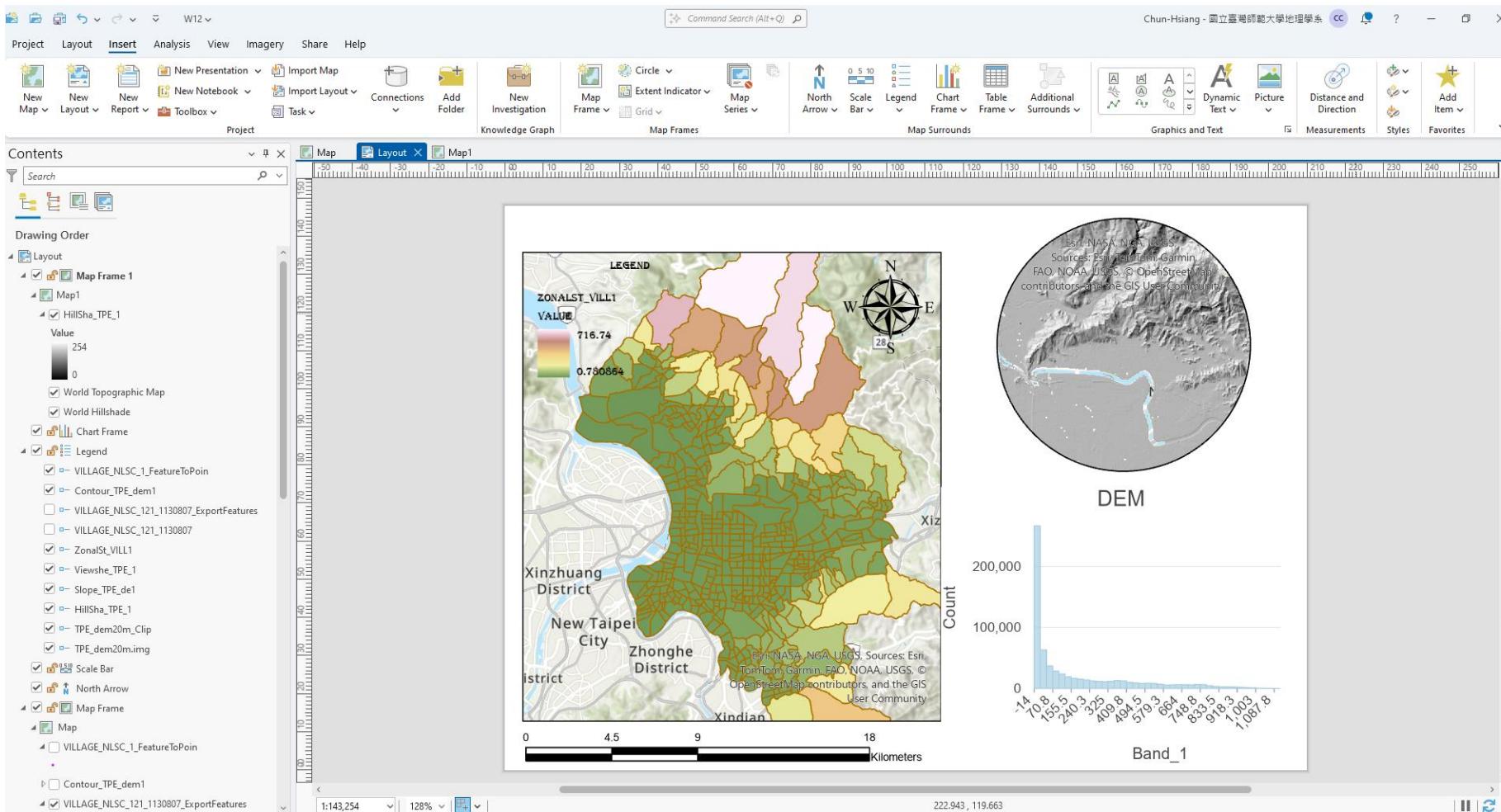
Add Map Frame



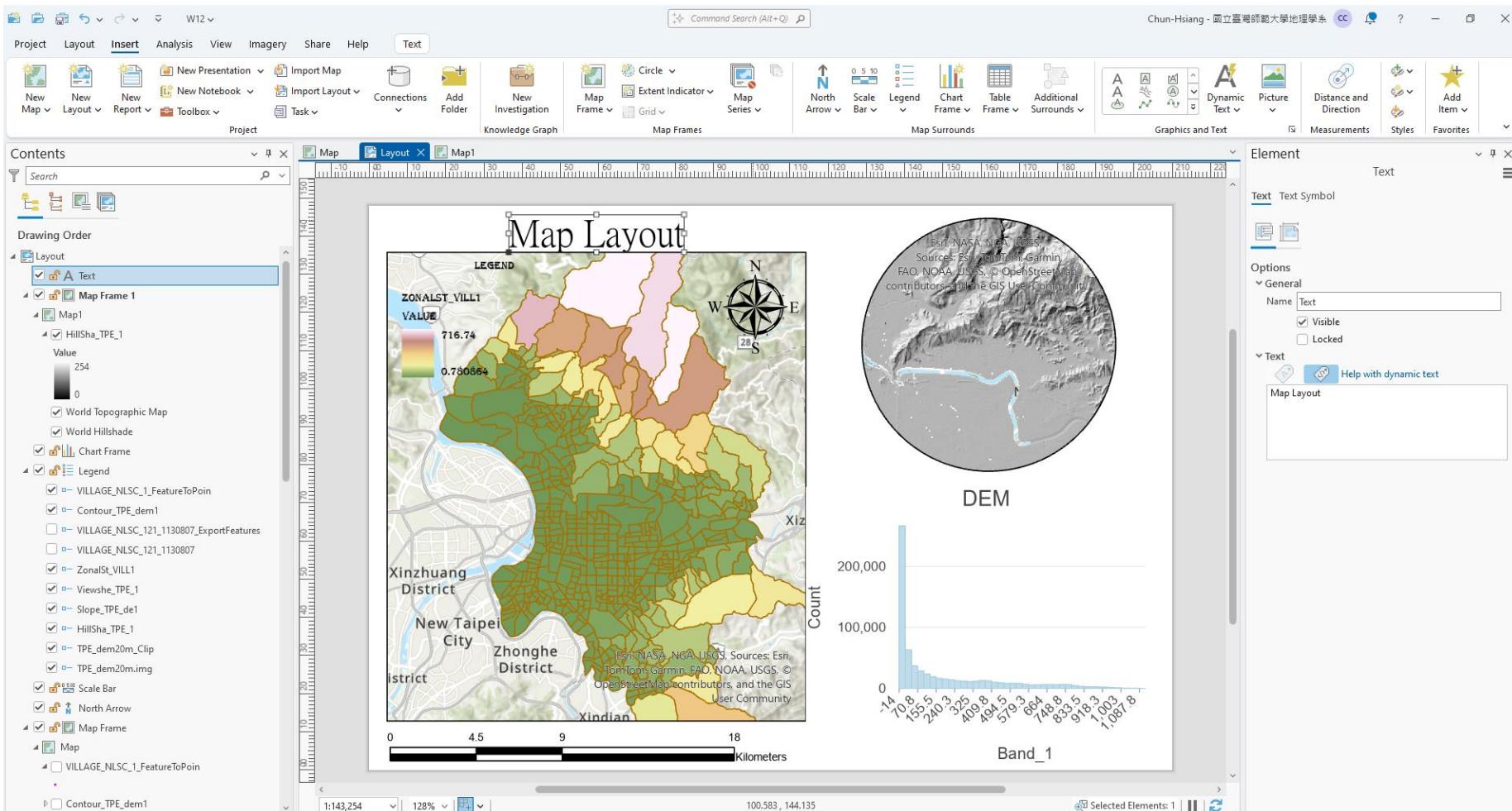
Add Map Frame | Circle



Map Layout



Add Text



Add Text

The screenshot shows the ArcGIS Pro interface with the 'Text' tool selected in the ribbon. The left pane displays the 'Contents' view with a tree structure of map elements. The main workspace contains a map of New Taipei City with several data layers, a DEM visualization, and a histogram titled 'Band_1'. The 'Element' pane on the right is open, showing settings for a selected 'Text' element, including font (Arial, 28 pt), color (black), and position.

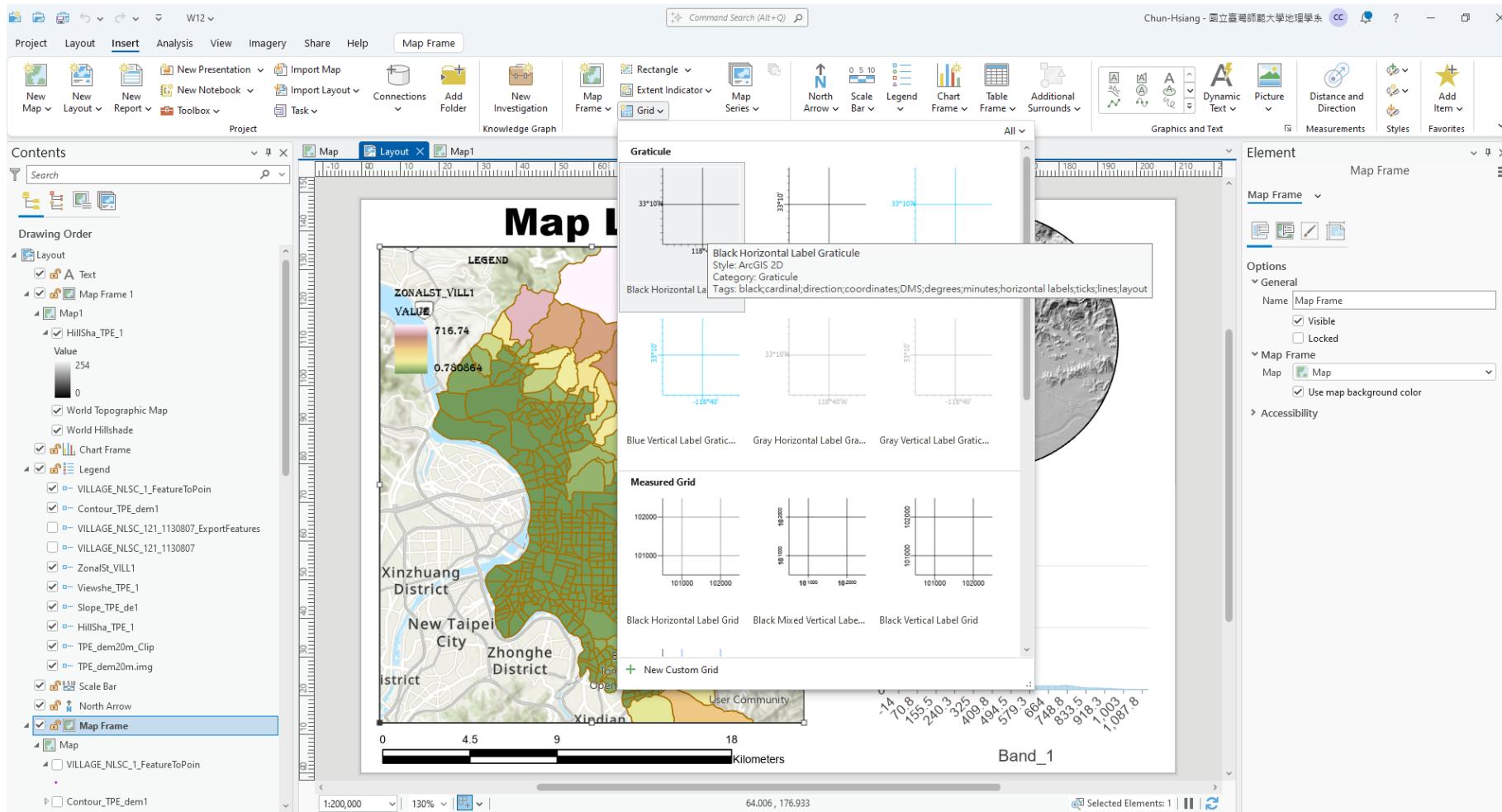
Map Layout Elements:

- Map:** Shows a choropleth map of New Taipei City districts with values ranging from 0 to 254. Labels include 'LEGEND', 'ZONALST_VILL1', 'VILLAGE_NLSC_1_ValueToPoint', 'HillSha_TPE_1', 'Contour_TPE_dem1', 'VILLAGE_NLSC_121_1130807_ExportFeatures', 'VILLAGE_NLSC_121_1130807', 'ZonalSt_VILL1', 'Viewshe_TPE_1', 'Slope_TPE_de1', 'HillSha_TPE_1', 'TPE_dem20m_Clip', 'TPE_dem20m.img', 'Scale Bar', 'North Arrow', and 'Map Frame'.
- DEM:** A circular visualization showing elevation data with a compass rose.
- Histogram:** A plot titled 'Band_1' showing the distribution of values, with the x-axis labeled 'Elevation' and the y-axis labeled 'Count'.

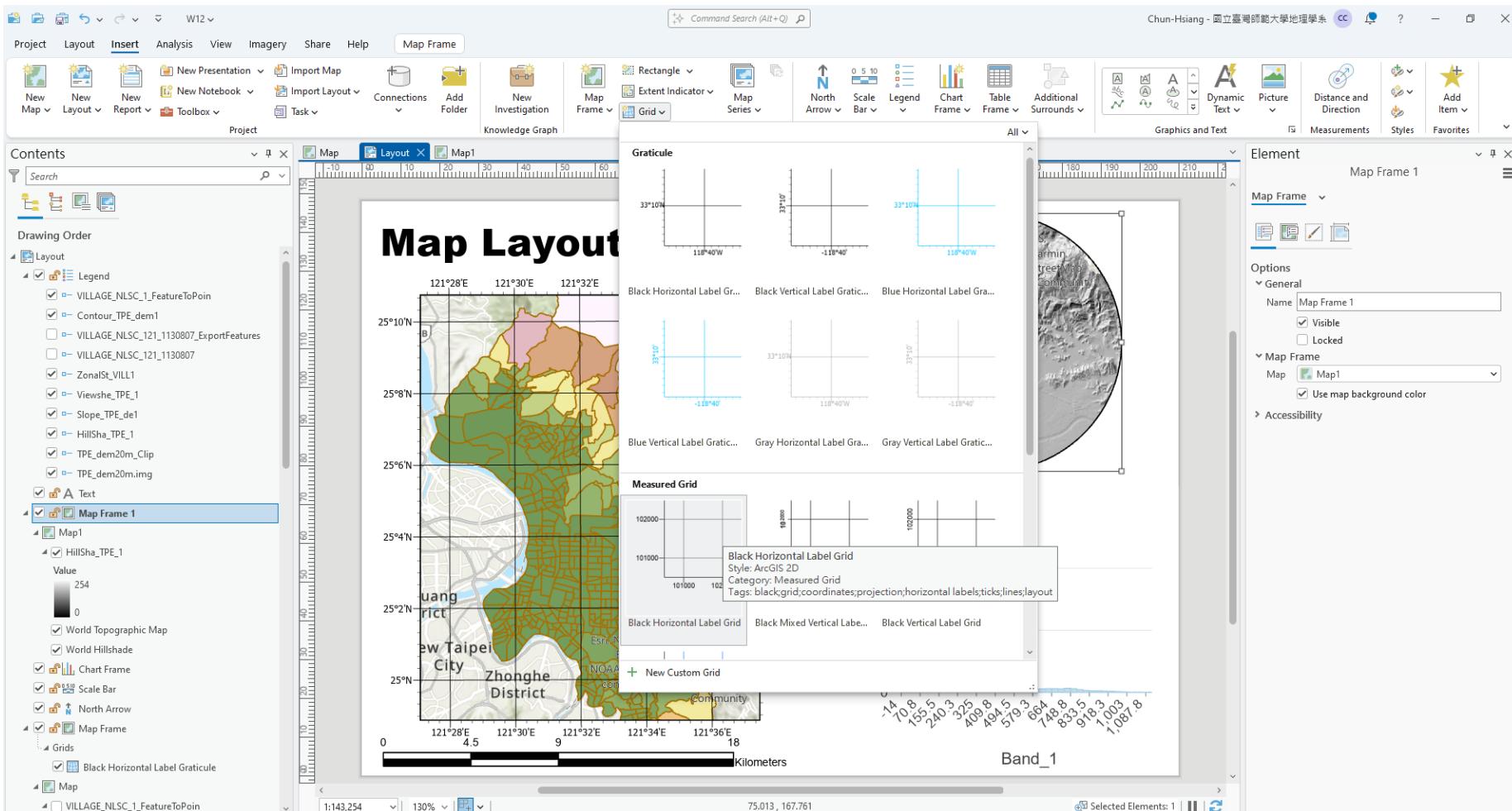
Element Properties (Text Element):

- Text:** Text Symbol
- Appearance:**
 - Font name: Arial
 - Font style: Black
 - Size: 28 pt
 - Text fill symbol: Black
 - Color: Black
 - Outline color: Black
 - Outline width: 0 pt
 - Underline: Off
 - Strikethrough: Off
 - Text case: Normal
 - Position adjustment: Normal
- Position:**
 - Horizontal alignment: Left
 - Vertical alignment: Top
 - Offset X: 0 pt
 - Offset Y: 0 pt

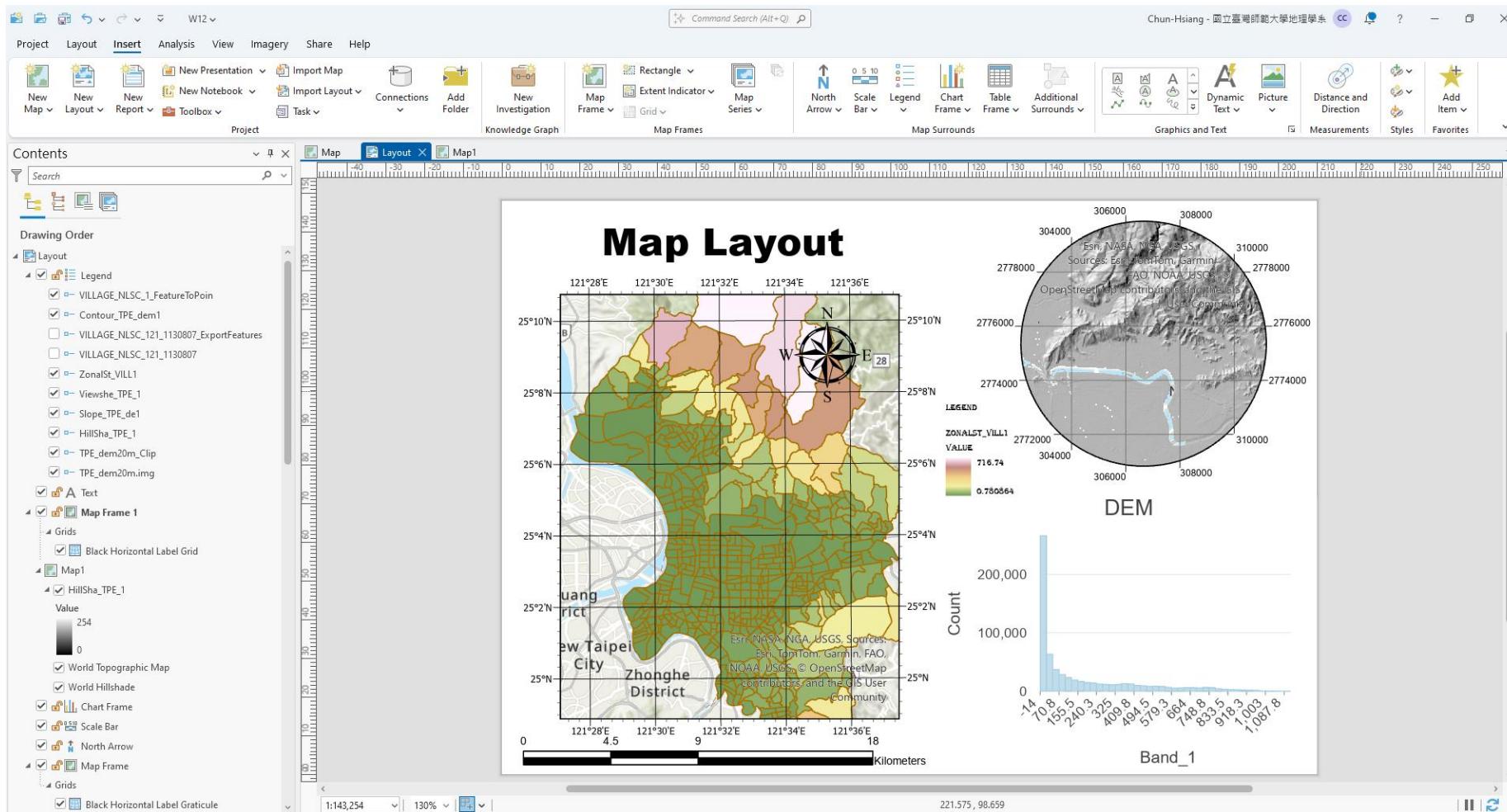
Add Graticule



Add Measured Grid



Final



The End

Thank you for your attention!

| Email: chchan@ntnu.edu.tw
Web: toodou.github.io